The Journal
Michigan
STATE MEDICAL SOCIETY

April, 1958
Volume 57
Number 4



STRIKE AT CANCER



ORAL

progestational agent
with
unexcelled potency
and
unsurpassed efficacy

in functional uterine bleeding

Functional uterine-bleeding is usually due to failure of ovulation with sustained estrogenic stimulation of the endometrium in the absence of progesterone. The most effective type of hormone in arresting a bout of functional uterine bleeding is a progestational agent.[1] Administered orally, NORLUTIN produces presecretory to secretory and marked progestational endometrium in 3 to 14 days.[1-3] The return of normal menstruation frequently can be induced by continued cyclic therapy with NORLUTIN during successive months.

case summary

A 44-year-old woman had spotting and bleeding for 10 days. She was treated with NORLUTIN, 10 mg. twice daily for 4 days. Bleeding stopped during medication and 24 to 72 hours after cessation of therapy normal withdrawal bleeding occurred.

References: (1) Greenblatt, R. B., & Clark, S. L.: M. Clin. North America, Philadelphia, W. B. Saunders Company (Mar.) 1957, p. 587. (2) Greenblatt, R. B.: *J. Clin. Endocrinol.* *16*:869, 1956. (3) Hertz, R.; Waite, J. H., & Thomas, L. B.: *Proc. Soc. Exper. Biol. & Med.* *91*:418, 1956.

NORLUTIN™

(norethindrone, Parke-Davis)

INDICATIONS FOR NORLUTIN: conditions involving deficiency of progesterone such as primary and secondary amenorrhea, menstrual irregularity, functional uterine bleeding, endocrine infertility, habitual abortion, threatened abortion, premenstrual tension, and dysmenorrhea.

PACKAGING: 5-mg. scored tablets (C. T. No. 882), bottles of 30.

PARKE, DAVIS & COMPANY · DETROIT 32, MICHIGAN

48086

ANNOUNCING

EXHIBITS-ON-FILM

The Filmstrip Library Of Scientific Exhibits

a unique new medical communications service—produced by the Medical Education Department, Lakeside Laboratories, Inc.

Significant scientific exhibits at medical meetings throughout the nation will be preserved on film...permanently available for study by the thousands of physicians anxious to keep up with the newest developments in medicine and surgery.

These filmstrips, together with recorded commentaries, will be given on request to Medical Schools, County, State and Sectional Medical Societies, *not as a loan but as a permanent contribution.*

ready now for distribution

Six widely acclaimed scientific exhibits selected from those at the 106th Annual Meeting, American Medical Association, New York, June 3-7, 1957.

FILMSTRIP 1 Part I The Present Indications for Cardiac Surgery • Robert P. Glover, Julio C. Davila and Robert G. Trout (Philadelphia) • Billings Gold Medal for excellence in the correlation and presentation of facts • **Part II** *Oral Organomercurial Diuretics* • Sim P. Dimitroff and George C. Griffith (Los Angeles)

FILMSTRIP 2 Part I *The Hands in Arthritis and Related Conditions* • Darrell C. Crain (Washington, D. C.) • Certificate of Merit • **Part II** *Intramuscular Iron for the Treatment of Iron Deficiency Anemia in Infancy* • Ralph O. Wallerstein, and M. Silvija Hoag (San Francisco)

FILMSTRIP 3 Part I *Bronchial Asthma* • John W. Irwin, Irving H. Itkin, Sandylee Weille and Nancy Little (Boston) • Honorable Mention Award • **Part II** *The Direct (Open) Surgical Repair of Congenital and Acquired Intracardiac Malformations* • C. W. Lillehei, H. E. Warden, R. A. DeWall, V. L. Gott, R. D. Sellers, M. Cohen, R. C. Read, R. L. Varco and O. H. Wangensteen (Minneapolis) • Hektoen Gold Medal for originality and excellence of presentation in an exhibit of original investigation

Officers of Medical Societies and Medical School libraries wishing to start their library of Filmstrips of Scientific Exhibits now, should address their requests to: EXHIBITS-ON-FILM, Medical Education Department, Lakeside Laboratories, Inc., Milwaukee 1, Wisconsin

Individual physicians who wish to arrange showings such as at hospital staff meetings should contact the secretary of their Medical Society or Medical School librarian.

32958

Say you saw it in the Journal of the Michigan State Medical Society

THE JOURNAL
of the Michigan State Medical Society

VOLUME 57 APRIL, 1958 NUMBER 4

Contributors to This Issue



MAX CUTLER, M.D.



H. D. DYKHUIZEN, M.D.



L. H. GARLAND, M.B.



LEON GOLDMAN, M.D.



H. M. NELSON, M.D.



C. H. ROSS, M.D.



ISIDORE SELZER, M.D.



J. W. STRAYER, M.D.



M. W. WHITE, M.D.



G. MENNEN WILLIAMS



T. WINSHIP, M.D.

Table of Contents

The Pursuit of the Unorthodox
L. H. Garland, M.B. 525

The Diagnosis and Treatment of the Less Obvious Carcinomas of the Thyroid
Theodore Winship, M.D., and *Randi V. Rosvoll, M.D.* 532

Cancer in Geriatrics
C. Howard Ross, M.D. 536

The Principles and Evaluation of Curative Cancer Therapy
Chandler Smith, M.D. 546

Patients with Multiple Skin Malignancies
Leon Goldman, M.D. 551

Lymphosarcoma of the Gastrointestinal Tract
John W. Strayer, M.D., F.A.C.S. 555

The Metastatic Carcinoid Syndrome
Richard C. Bates, M.D., and *Leo W. Walker, M.D.* 559

Malignant Melanoma
J. L. Ponka, M.D., D. M. Evans, M.D. and *J. H. Wylie, M.D.* 563

Cancer of the Breast
Max Cutler, M.D. 567

The Benign Peptic Ulcer
M. W. White, M.D. 573

Pathology and Treatment of Urethral Caruncles
Harold D. Dykhuizen, M.D. 579

Thorazine Jaundice
Kirk V. Cammack, M.D., John W. Hoffman, D.M.D., M.D., and *Max Dodds, M.D.* 582

The Michigan Tumor Registry
Isidore Selzer, M.D. 587

A Cancer Registry Program
Harry M. Nelson, M.D. 592

Physicians and Citizenship
Honorable G. Mennen Williams 595

Address of Welcome
Congressman Gerald R. Ford, Jr. 598

Detroit Surgical Association—Abstracts of Papers Presented at Recent Meetings 599

EDITORIAL 602

President's Message 603
Prepaid Medical Care Plans Committee 608
Michigan's Department of Health 612
Legal Opinions 615
Letters to the Editor 618
In Memoriam 620
News Medical 622
The Doctor's Library 634

Editorial Comment 474
You and Your Business 476
Seminar Draws Record Representation 486
Cancer Comment 496
PR Report 498
New Inservice Training Program Offered Medical Assistants 504
Rural Health Conference a Real Triumph 508
AMA News Notes 510

© 1958 by Michigan State Medical Society

THE JOURNAL
of the Michigan State Medical Society

VOLUME 57 APRIL, 1958 NUMBER 4

PUBLICATION COMMITTEE

BRADLEY M. HARRIS, M.D., *Chairman*.....Ypsilanti
B. T. MONTGOMERY, M.D.....Sault Ste. Marie
G. THOMAS McKEAN, M.D.....Detroit
C. ALLEN PAYNE, M.D.....Grand Rapids
D. G. PIKE, M.D.....Traverse City
E. S. OLDHAM, M.D.....Breckenridge

Office of Publication
2642 University Avenue
Saint Paul 14, Minnesota

Editor
WILFRID HAUGHEY, M.D.
610 Post Bldg., Battle Creek, Michigan

Assistant Editor
L. J. BAILEY, M.D
Medical Concourse, Northland Center, Detroit 35, Michigan

Secretary and Business Manager of THE JOURNAL
L. FERNALD FOSTER, M.D.
441 E. Jefferson, Detroit, Michigan

Executive Director
WM. J. BURNS, LL.B.
606 Townsend Street, Lansing 15, Michigan

All communications relative to exchanges, books for review, manuscripts, should be addressed to Wilfrid Haughey, M.D., 610 Post Bldg., Battle Creek, Michigan.

All communications regarding advertising and subscription should be addressed to Wm. J. Burns, 2642 University Avenue, Saint Paul 14, Minnesota, or 606 Townsend Street, Lansing 15, Michigan. Telephone Ivanhoe 5-7125.

Published monthly by the Michigan State Medical Society as its official journal at 2642 University Avenue, Saint Paul 14, Minnesota.

Entered at the post office at Saint Paul, Minnesota, as second class matter, May 7, 1930, under the Act of March 3, 1879.

Acceptance for mailing at special rate of postage provided for in Section 1103 Act of October 3, 1917, authorized August 7, 1918

Yearly subscription rate, $6.00; single copies, 60 cents. Additional postage; Canada, $1.00 per year; Pan-American Union, $2.50 per year; Foreign, $2.50 per year.

© 1958 by Michigan State Medical Society
PRINTED IN U.S.A.

OFFICERS OF THE SOCIETY

1956-1957

President	G. W. SLAGLE, M.D.	Battle Creek
President-Elect	G. B. SALTONSTALL, M.D.	Charlevoix
Secretary	L. FERNALD FOSTER, M.D.	Detroit
Treasurer	W. A. HYLAND, M.D.	Grand Rapids
Speaker	K. H. JOHNSON, M.D.	Lansing
Vice Speaker	J. J. LIGHTBODY, M.D.	Detroit
Editor	WILFRED HAUGHEY, M.D.	Battle Creek
Assistant Editor	L. J. BAILEY, M.D.	Detroit

THE COUNCIL

D. BRUCE WILEY, M.D., *Chairman*, Utica
W. B. HARM, M.D., *Vice Chairman*, Detroit
L. FERNALD FOSTER, M.D., *Secretary*, Bay City

	District		*Term Expires*
A. E. SCHILLER, M.D.	1st	Detroit	1961
O. B. McGILLICUDDY, M.D.	2nd	Lansing	1960
H. J. MEIER, M.D.	3rd	Coldwater	1960
RALPH W. SHOOK, M.D.	4th	Kalamazoo	1961
C. ALLEN PAYNE, M.D.	5th	Grand Rapids	1961
H. H. HISCOCK, M.D.	6th	Flint	1961
J. F. BEER, M.D.	7th	St. Clair	1962
E. S. OLDHAM, M.D.	8th	Breckenridge	1962
D. G. PIKE, M.D.	9th	Traverse City	1962
O. J. JOHNSON, M.D.	10th	Bay City	1962
W. M. LeFEVRE, M.D.	11th	Muskegon	1958
B. T. MONTGOMERY, M. D.	12th	Sault Ste. Marie	1958
T. P. WICKLIFFE, M.D.	13th	Calumet	1959
B. M. HARRIS, M.D.	14th	Ypsilanti	1959
D. BRUCE WILEY, M.D.	15th	Utica	1960
G. THOMAS McKEAN, M.D.	16th	Detroit	1960
W. B. HARM, M.D.	17th	Detroit	1958
WILLIAM BROMME, M.D.	18th	Detroit	1959
G. W. SLAGLE, M.D.	*President*		Battle Creek
G. B. SALTONSTALL, M.D.	*President-Elect*		Charlevoix
K. H. JOHNSON, M.D.	*Speaker*		Lansing
J. J. LIGHTBODY, M.D.	*Vice-Speaker*		Detroit
L. FERNALD FOSTER, M.D.	*Secretary*		Detroit
W. A. HYLAND, M.D.	*Treasurer*		Grand Rapids
ARCH WALLS, M.D.	*Past President*		Detroit

EXECUTIVE COMMITTEE OF THE COUNCIL

D. BRUCE WILEY, M.D.....Chairman
W. B. HARM, M.D.....Vice Chairman
W. M. LeFEVRE, M.D.....Chairman, County Societies Committee
B. M. HARRIS, M.D.....Chairman, Publication Committee
RALPH W. SHOOK, M.D.....Chairman, Finance Committee
K. H. JOHNSON, M.D.....Speaker
J. J. LIGHTBODY, M.D.....Vice Speaker
G. W. SLAGLE, M.D.....President
G. B. SALTONSTALL, M.D.....President-Elect
L. FERNALD FOSTER, M.D.....Secretary
W. A. HYLAND, M.D.....Treasurer

SECTION OFFICERS

Dermatology and Syphilology
Coleman Mopper, M.D.....Detroit *Chairman*
Alice E. Palmer, M.D.....Detroit *Secretary*

Gastroenterology and Proctology
E. J. Tallant, M.D.....Detroit *Chairman*
J. F. Wenzel, M.D.....Detroit *Secretary*

General Practice
E. M. Wakeman, M.D.....Dearborn *Chairman*
C. W. Royer, M.D.....Battle Creek *Secretary*

Gynecology and Obstetrics
R. W. McClure, M.D.....Detroit *Chairman*
L. S. Griffith, M.D.....Grand Rapids *Secretary*

Medicine
J. M. Kaufman, M.D.....Detroit *Chairman*
J. W. Hall, M.D.....Traverse City *Secretary*

Nervous and Mental Diseases
S. C. Mason, M.D.....Ann Arbor *Chairman*
S. M. Gould, Jr.....Ann Arbor *Secretary*

Occupational Medicine
P. B. Rastello, M.D.....Detroit *Chairman*
T. I. Boileau, M.D.....Birmingham *Secretary*

Ophthalmology and Otolaryngology
James E. Coyle, M.D.....Detroit *Chairman (Oto.)*
H. A. Dunlap, M.D.....Detroit *Co-Chairman (Ophth.)*
Harold F. Schuknecht, M.D.....Detroit *Secretary (Oto.)*
F. A. Barbour, M.D.....Flint *Co-Secretary (Ophth.)*

Pediatrics
A. M. Hill, M.D.....Grand Rapids *Chairman*
G. E. Hause, M.D.....Detroit *Secretary*

Public Health and Preventive Medicine
J. K. Altland, M.D.....Lansing *Chairman*
H. B. Robins, M.D.....Battle Creek *Secretary*

Radiology, Pathology, Anesthesiology
R. R. Benson, M.D.....Grand Rapids *Chairman (Rad.)*
R. B. Sweet, M.D.....Ann Arbor *Vice Chairman (Anes.)*
Viola G. Brekke, M.D.....Highland Park *Secretary (Path.)*

Surgery
H. M. Bishop, M.D.....Saginaw *Chairman*
R. F. Salot, M.D.....Mt. Clemens *Secretary*

Urology
R. P. Lytle, M.D.....Detroit *Chairman*
A. W. Bohne, M.D.....Detroit *Secretary*

DELEGATES TO A. M. A.

Delegates

W. A. Hyland, M.D., *Chairman*, Grand Rapids	1959
W. D. Barrett, M.D., Detroit	1958
J. S. DeTar, M.D., Milan	1959
W. H. Huron, M.D., Iron Mountain	1958
R. L. Novy, M.D., Detroit	1958
C. I. Owen, M.D., Detroit	1959

Alternates

Wm. Bromme, M.D., Detroit	1958
J. R. Rodger, M.D., Bellaire	1958
G. W. Slagle, M.D., Battle Creek	1958
W. W. Babcock, M.D., Detroit	1959
O. J. Johnson, M.D., Bay City	1959
E. F. Sladek, M.D., Traverse City	1959

Section Delegate
G. C. Penberthy, M.D.....Detroit

SYNTHETIC BILIARY ABSTERGENT

ZANCHOL®

(brand of florantyrone)

Fills an Important Postcholecystectomy Need

The excellent results with Zanchol in patients whose gallbladders have been removed have been most pronounced in two phases of management:

1. Early—Zanchol in Postoperative Care. T-tube studies have demonstrated that Zanchol increases the volume and fluidity of bile, at the same time changing its color to a clear, brilliant green. The greatly improved abstergent cleansing action of the bile is noted in its ability to keep the T tubes clean[1] without rinsing in most cases.

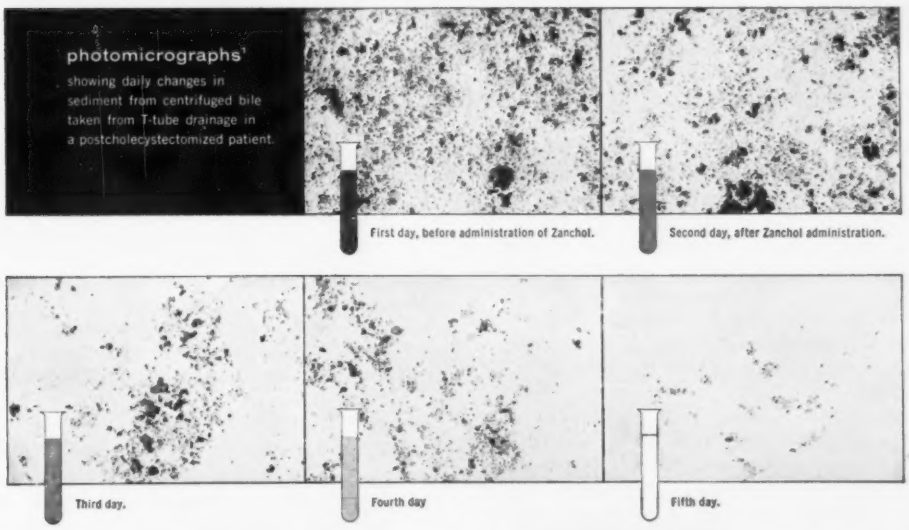
2. Late—Zanchol in Postcholecystectomy Syndrome. By improving the physicochemical properties of bile and increasing its flow, Zanchol acts to eliminate biliary stasis and sharply reduce or eliminate biliary sediment. The drug may be employed in both prophylaxis and therapy of the postcholecystectomy syndrome.

Medical Indication for Zanchol
This includes the treatment of patients with chronic cholecystitis for which surgery is not required or may be impossible for any reason.

Dosage: one tablet three or four times daily. Tablets of 250 mg. each.

G. D. Searle & Co., Chicago 80, Illinois.

Research in the Service of Medicine.



1. McGowan, J. M.: Clinical Significance of Changes in Common Duct Bile Resulting from a New Synthetic Choleretic, Surg., Gynec. & Obst. *103*:163 (Aug.) 1956.

SEARLE

Editorial Comment

BLUE CROSS HIRES 40-TON "BRAIN"

Michigan Blue Cross-Blue Shield recently put into operation a giant electronic "brain" to handle records involving their more than 3½ million members.

Officials of Datamatic Division of Minneapolis-Honeywell Regulator Company, manufacturer of the device, said it is the first of its size designed primarily for business use.

The 'brain," called Datamatic 1000, is valued at more than 1½ million dollars. The hospital-medical-care agencies are leasing it at $37,000 a month.

Weighing 40 tons, Datamatic 1000 occupies three large rooms on the sixth floor of the Blue Cross-Blue Shield building at 441 E. Jefferson. It takes up a total of 5,000 square feet of space.

William S. McNary, executive vice president of Blue Cross, said the primary purpose in using the "brain" is to give better service to subscribers.

"It will provide faster and more accurate accounting and give absolutely standard application of policies," he said.

Jay C. Ketchum, Blue Shield executive vice president, added that it will produce valuable "by-products" in the form of statistical information virtually impossible for individuals to compile.

McNary was unable to estimate how many employes Datamatic 1000 will replace, but he said no worker will lose his job because of it.

It will take two years to transfer the entire work load to the machine, and in that time normal attrition will decrease the number of employes, he said.

Datamatic Division, located in Newton Highlands, Massachusetts, a suburb of Boston, is turning out several more of the machines for other agencies and companies, including the Treasury Department.

Three of these, First National Bank of Boston, County of Los Angeles and the Baltimore & Ohio Railroad, will use Blue Cross-Blue Shield's "brain" in the evenings while waiting for their own to be installed.

The Datamatic system will reduce all Blue Cross-Blue Shield records to 20 reels of magnetic tape, each three inches wide and 2,700 feet long.

It will take just two hours to handle the daily average of 25,000 alterations or additions to these records.

The remaining six hours in the work day will be devoted to billing operations and compilation of statistics.

A high-speed printer translates the coded information into words and numbers at the rate of 900 lines a minute.

The designers say only human error in "feeding" the machine can affect its accuracy.

Continual proper function is guarded by a self-checking unit which locates any section of the machine that is starting to go bad. The Datamatic engineers on duty then can replace or repair it before harm is done.

Installation of the big "brain" took more than a year.—GEOFFREY HOWES in *Detroit Free Press*, February 19, 1958.

AILING HEALTH PLAN

Britain's womb-to-tomb National Health Service is in the red again. Last week Chancellor of the Exchequer Derick Heathcoat-Amory gave Commons the bad news: individual contributions will be upped, on July 1 as much as 37 per cent.

Before the N.H.S. was launched in 1948, optimists estimated that it would cost $490 million a year; of this, $355 million would come from general tax funds, the balance from individual contributions of up to about 20 cents a week. But the estimates proved woefully low.

Total costs have rocketed to an estimated $2 billion for the next fiscal year. To raise even one-fifth of this whopping bill (four-fifths will still come from taxes), the Chancellor set these new weekly rates: for employed men, 7 cents more, for a total of 26 cents; employed women, 5 cents more, total 19 cents; employed juveniles (under eighteen), two cents more, total 12 cents. In addition, employers' fees will go up from 4 cents per worker to 6 cents. For children not yet employed, the rate goes up 2 cents to a total of 16 cents.

The Socialists promptly blasted the government for laying the added burden on the whole population, meaning that most of it would be borne by the well. Deliberately so, said Heathcoat-Amory: the government believed this was fairer than putting a still heavier burden on the sick, who are least able to bear it.—*Time*, March 3, 1958.

Eighty per cent of persons having Stage I cervical cancer will be free of disease five years after adequate treatment, compared to but 20 to 30 per cent of Stage III cases.

* * *

Any woman over the age of twenty, who has irregular vaginal bleeding, deserves a careful pelvic examination.



IN ALL DIARRHEAS . . . REGARDLESS OF ETIOLOGY

comprehensive control with **CREMOMYCIN**®

SULFASUXIDINE* PECTIN-KAOLIN-NEOMYCIN SUSPENSION

SOOTHING ACTION . . . Kaolin and pectin coat and soothe the inflamed mucosa, adsorb toxins and help reduce intestinal hypermotility.

BROAD THERAPY . . . The combined antibacterial effectiveness of neomycin and Sulfasuxidine is concentrated in the bowel since the absorption of both agents is negligible.

LOCAL IRRITATION IS REDUCED and control is instituted against spread of infective organisms and loss of body fluid.

PALATABLE creamy pink, fruit-flavored CREMOMYCIN is pleasant tasting, readily accepted by patients of all ages.

*Sulfasuxidine is a trade-mark of Merck & Co., Inc.

MSD **MERCK SHARP & DOHME**
DIVISION OF MERCK & CO., Inc., PHILADELPHIA 1, PA.

You and Your Business

AMERICAN BOARD OF OBSTETRICS AND GYNECOLOGY

The next scheduled examinations (Part II), oral and clinical for all candidates eligible, will be conducted at the Edgewater Beach Hotel, Chicago, Illinois, by the entire Board from May 7 through 17, 1958. Formal notice of the exact time of each candidate's examination will be sent him in advance of the examination dates.

Candidates who participated in the Part I Examinations will be notified of their eligibility for the Part II Examinations at the earliest possible date.

Current Bulletins of this Board may be obtained by writing to: Robert L. Faulkner, M.D., Secretary-Treasurer, American Board of Obstetrics and Gynecology, 2105 Adelbert Road, Cleveland 6, Ohio.

REVISED REGULATIONS FOR RA COMMISSIONS

Liberalization of the restrictions on the granting of Regular Army commissions in the Medical Service Corps to highly qualified professional candidates has been announced by the Army Medical Service.

This step has been taken to strengthen the Regular Army component of the Medical Service Corps. Under the revised Army regulations 601-100 and 601-124, applicants for commissions to the Medical Service Corps, Regular Army, will no longer be required to serve a period of active duty before being appointed.

It will now be possible to appoint into the Army Medical Service Corps selected college graduates in almost all the professional and technical fields who hold master's degrees or doctorates or baccalaureate degrees with three years of experience, reserve officers now on duty with the Corps, and outstanding enlisted personnel or warrant officers.

Officers whose previous applications were rejected may reapply at any time they meet the qualifications shown in these Army regulations.

Another liberalization of restrictions is the modification of the age requirements, accomplished by substracting all periods of active commissioned service since December 6, 1941, from the current age of the applicant to determine whether or not the age limit of thirty years is exceeded. Only applicants who can complete twenty years' active commissioned service by age fifty-five years, are eligible to apply.

More than fifty different occupational specialties are represented in the Medical Service Corps which provides the Army Medical Service with qualified personnel to accomplish the scientific and technical skills necessary to meet the demands of modern medicine.

Officers thoroughly experienced or schooled in such techniques as hospital management, personnel administration, the procurement and distribution of all items necessary to the Army Medical Service and to the pharmacological arts, make up the AMS roster.

MICHIGAN MATERNAL TISSUE REGISTRY

The Michigan Maternal Tissue Registry was established at the University of Michigan Medical Center Department of Pathology by the Maternal Health Committee, Michigan State Medical Society, in 1957. The Registry is sponsored by the Maternal Health Committee, the Michigan State Medical Society, the Michigan Pathological Society, the Michigan Society of Obstetricians and Gynecologists, and the Department of Pathology at the University of Michigan Medical Center.

The purpose of the Registry is as stated by the subcommittee of the Maternal Health Committee including members of the sponsoring groups:

1. To collect, diagnose and study tissues submitted from recently pregnant women such as uterus, tumors, unusual placentas, etc., or tissues from maternal deaths in Michigan upon whom necropsies have been performed.

2. To analyze and correlate the verified pathologic diagnoses with the clinical data so that the maternal deaths can be more accurately evaluated.

3. To supply pathologic material to qualified residents and physicians for professional education.

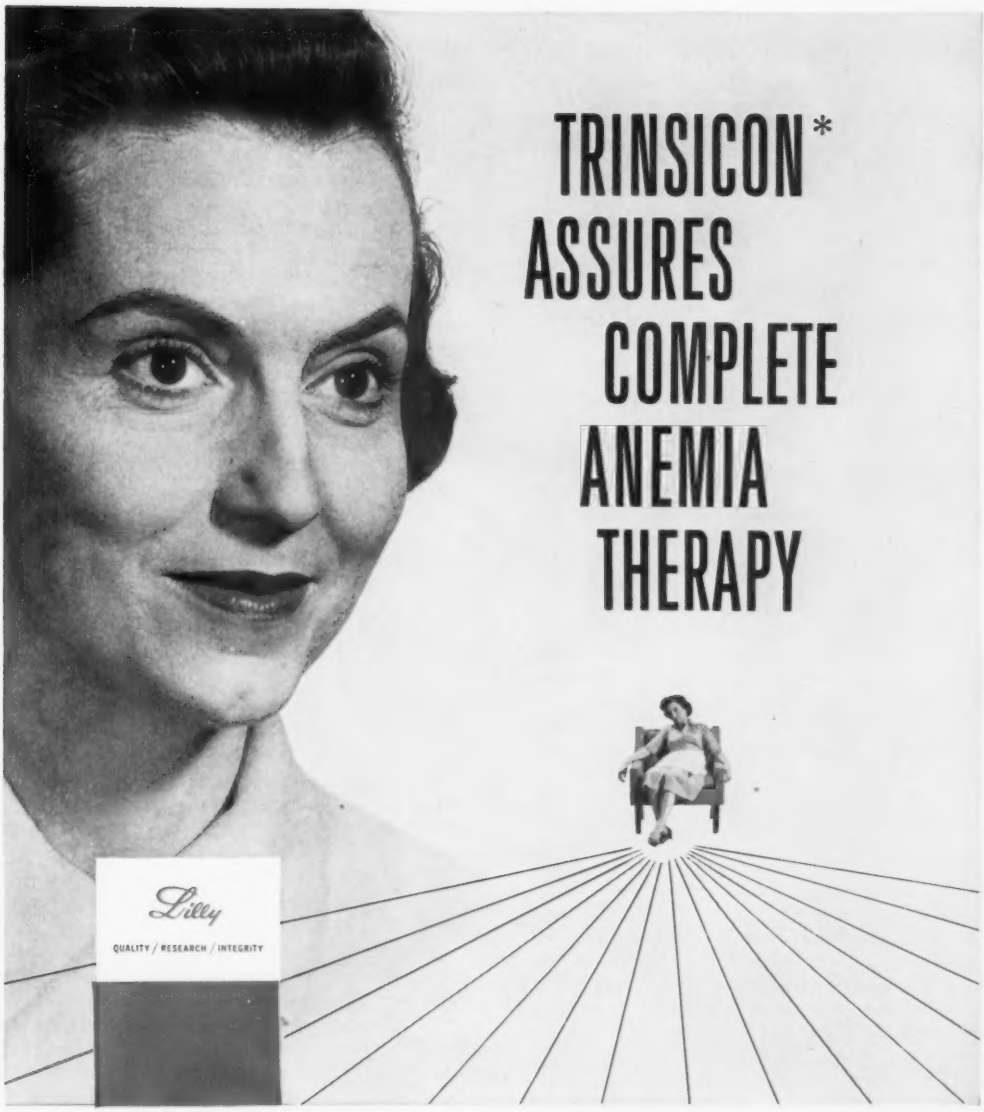
4. To stimulate interest in securing more necropsies in cases of maternal death.

5. To report regularly to the Maternal Health Committee.

A suite of rooms in the Pathology Unit of the new Medical Science Building provides ample area for study of the material. Ten pathologists, Board certified or qualified, are available to review the material.

The members of the Michigan Society of Obstetricians and Gynecologists and the Michigan Pathological Society are requested to submit all available clinical, laboratory, and necropsy records and tissues in cases of maternal deaths for the use by physicians of the sponsoring groups and others

(Continued on Page 478)



Provides therapeutic quantities of all known hematinic factors

Potent 'Trinsicon' offers complete and convenient anemia therapy plus maximum absorption and tolerance. Just two Pulvules 'Trinsicon' daily produce a standard response in the average uncomplicated case of pernicious anemia (and related megaloblastic anemias) and provide at least an average dose of iron for hypochromic anemias, including nutritional deficiency types. The intrinsic factor in the 'Trinsicon' formula enhances (never inhibits) vitamin B_{12} absorption.

Available in bottles of 60 and 500.

*'Trinsicon' (Hematinic Concentrate with Intrinsic Factor, Lilly)

POLIOVACCINE

ELI LILLY AND COMPANY • INDIANAPOLIS 6, INDIANA, U.S.A.

819034

MICHIGAN MATERNAL TISSUE REGISTRY

(Continued from Page 476)

interested. All such material from the necropsy series at the University of Michigan Medical Center is being included in this study.

Further details about the Registry may be obtained from the Chairman of the Department of Pathology, University of Michigan Medical Center, Ann Arbor.

Subcommittee on the Michigan Maternal Tissue Registry, Maternal Health Committee, MSMS

MICHIGAN CANCER CO-ORDINATING COMMITTEE UNIFIES PROGRESS

A voluntary co-operating effort of representatives of six state agencies, interested in Cancer Control, was formed November 12, 1953, and called the Michigan Cancer Co-ordinating Committee.

The six interested agencies are: American Cancer Society, Michigan Division, Inc.; American Cancer Society, Southeastern Michigan Division; Michigan Department of Health; Michigan Health Officers Association; Michigan State Dental Association; and Michigan State Medical Society.

In less than five years, the Cancer Co-ordinating Committee has justified its existence by encouraging more cancer education, especially among professional groups. It urges each of its component members to further the endeavors of that group in a co-ordinated non-overlapping program, in line with the MCCC purpose to help develop and maintain a more efficient and effective, complete dynamic cancer control program in Michigan.

The Michigan Cancer Co-ordinating Committee is, in effect, a "stimulator" of activity on the part of the formalized groups which compose it. It activates its member organizations to greater efforts, without duplication, in the fight against cancer.

Two Popular Publications

The publications of the Michigan Cancer Co-ordinating Committee for the public include (a) "The Story of Cancer for High Schools," and (b) "Strength Through Unity Against Cancer." Close to 50,000 of these two publications have been distributed throughout Michigan, as well as the rest of the United States, Hawaii and Alaska during the past five years.

The personnel of the Michigan Cancer Co-ordinating Committee for 1958 is listed on Page 484 of this issue.

For further information and copies of the publications of the Michigan Cancer Co-ordinating Committee, write the Chairman, H. M. Nelson, M.D., Box 539, Lansing.

MEDICAL INSURANCE

The sweeping new plans for Michigan Blue Shield, as announced this week by the state medical society, will repair some of the weaknesses of the present plan.

New income limits, addition of new services which people often need, and breaking down the present dividing line which covers work in hospitals but doesn't cover the same work outside a hospital are some of the principal changes.

Inclusion of a "co-insurance" factor — for outside-the-hospital care, subscribers will be required to pay 10 per cent, or $5 whichever is greater—is a new aspect. It is a sort of "deductible" plan in a way. Financially the subscriber absorbs a little of the risk, and Blue Shield absorbs a lot of it.

Even the UAW, which has vigorously opposed deductible policies, finds this one to be much more satisfactory—or less unsatisfactory—from their viewpoint. Perhaps the doctors, so often accused of being stiff-necked, thus have given example of how to start a ball rolling. Let's see whether the rest of us can meet them half way.

Remember—for the doctors are remembering—their purpose in life is to be doctors. The only reason they started Blue Shield was because nobody else had invented it, and at the time the public was clamoring for some such thing.

The alternative was government medicine.

We should keep in mind the new proposals, which will take time to work out, don't signify something for nothing. We'll get more. We'll pay more.

It will behoove us also to find out just what our new Blue Shield will do for us, and what it won't.

Better provide ourselves with the facts, rather than get mad later because we don't get something we sort of dreamed we were getting.

But it looks to us like welcome improvement. It will not—and this is important—"pay for everything." It will cover from 90 to 100 per cent of the cost of the larger medical expenses for the average family. It will not cover all the $5 and $10 items which crop up.

Michigan's doctors have come up with magnificent progress, stepping out ahead of any similar group in any other state. It is no empty phrase to say we have generous cause to be proud of them.—*Detroit Times*, September 29, 1957.

AMEF CHAIRMAN STATES CASE FOR PHYSICIAN SUPPORT

Every physician earning his livelihood due to the possession of a medical degree, owes an incalculable and never ending debt to his medical school. Increased costs of operation of our 85

(Continued on Page 480)

BONADOXIN®

STOPS MORNING SICKNESS... BUT





...IT DOESN'T STOP THE PATIENT

BONADOXIN brings relief to 88.1% of patients... often within a few hours.[1,2] But it does not produce drowsiness, or side effects associated with over-potent antinauseants. With safe BONADOXIN, "toxicity and intolerance... [is] zero."[2]

Is she blue at breakfast? Prescribe BONADOXIN. Usually just one tablet at bedtime stops nausea and vomiting of pregnancy...

and just one supplies the full 50 mg. of pyridoxine. ⇦

EACH TABLET CONTAINS:

MECLIZINE HCl . . . . . 25 mg.
PYRIDOXINE HCl . . . . . 50 mg.
Bottles of 25 and 100.

References: 1. Groskloss, H. H., et al: Clin. Med. 2:885 (Sept.) 1955. 2. Goldsmith, J. W.: Minnesota Med. 40:99 (Feb.) 1957.

...and for a nutritional buildup plus freedom from leg cramps*

STORCAVITE®

phosphate-free calcium, 10 essential vitamins, 8 important minerals. Bottles of 100.

*due to calcium-phosphorus imbalance

Roerig Rx

NEW YORK 17, NEW YORK
Division, Chas. Pfizer & Co., Inc.

AMEF CHAIRMAN STATES CASE FOR PHYSICIAN SUPPORT

(Continued from Page 478)

medical schools, is surpassing the amount obtained through taxes and endowments.

It is estimated that over two hundred million dollars are required for operating expenses each year. So far, the AMEF has only been able to raise and contribute one-half of one per cent of this amount.

The State of Michigan with approximately 6,000 physicians contributed less than ten thousand dollars last year, or only 1/100th of the million raised. This represents approximately one-and-a-half dollars for each doctor in the state, whereas $10 should be the absolute minimum. Nine states have solved this problem by an increase in state dues ranging from $5 to $20. Even a $10 levy in Michigan would produce $60,000, or over six times what is now contributed.

Only 44,000 doctors participated last year. If one hundred thousand doctors contributed $100 each, ten million needed dollars would be raised. We can rest assured if this money is not contributed by doctors, our Federal Government will allocate the necessary funds and, inevitably, Federal control over our medical schools will be increased.

The AMEF provides the mechanism through which individual members of the medical profession can shoulder their share of the support of our medical education system. The AMA underwrites all costs of promotion and adminitsration of the Foundation. Thus, AMEF is one of the few organizations raising money where the entire income goes to the cause for which the contributions are given.

Doctors have felt generally that the voluntary method of giving should be preserved. Recent experience in Wayne County during our Building Fund Drive, indicates only about 50 per cent of the membership will contribute adequately on a voluntary basis.

If our medical schools are to preserve some semblance of freedom from Federal control, the physicians of America must drastically increase their contributions to the AMEF. All physicians of Michigan should, in their own best interest, make as an absolute minimum a $10 contribution to this fund. Checks should be made payable to the AMEF and mailed to 535 North Dearborn Street, Chicago, Illinois. A physician may specifically earmark his contribution for the medical school of his choice.

Any amount you give is tax deductible. Make a contribution now toward the debt you can never fully repay. — F. P. RHOADES, M.D., AMEF Chairman for Michigan, in *Detroit Medical News,* February 17, 1958.

MSMS PARTICIPATION CARDS READIED

In line with the 1957 House of Delegates action, Medical Service Enrollment cards are now being prepared for distribution to all Michigan doctors of medicine. Return of the signed cards will enroll the physician as a participating doctor with Michigan Medical Service (Blue Shield) only.

In announcing the new plan, Max L. Lichter, M.D., chairman of the MSMS Medical Care Insurance Committee, said:

"With the introduction of the new cards, doctors will be, in a sense, participating with their own State Medical Society. The cards will authorize the Society to enroll the signed physician with a specific insurance plan that has met the requirements set forth in the Society's Statement of Principles of Prepaid Medical Care Insurance, approved by Delegates last September."

Doctor Lichter continued:

"Doctors will be authorizing their participation with Blue Shield by signing this card. If, in the future, another plan becomes available, Michigan doctors will be given a separate opportunity to participate in the additional plan if they wish."

The MSMS Participation Campaign is setting its sights on 99 44/100 per cent participation of medical society members. The provisions of the new Blue Shield contracts and its fee schedules were developed after months of study during which interested groups and individuals presented their views and recommendations.

DOCTORS' MEDICAL SERVICE ENROLLMENT AUTHORIZATION

_____, 195—

To Michigan State Medical Society:

I am a doctor of medicine, duly licensed to practice in the State of Michigan and am willing to provide medical services under such pre-payment service plans as shall conform to the Statement of Principles heretofore adopted by the House of Delegates of Michigan State Medical Society. I hereby authorize you to enroll me as a participating doctor under the approved plan of Michigan Medical Service, a non-profit corporation.

It is understood that my enrollment thereunder may be discontinued at any time by giving you thirty (30) days notice in writing to discontinue my participation.

It is further understood that upon the approval by Michigan State Medical Society of any additional plan or plans, I am to be given notice thereof and the opportunity to determine whether or not I wish to participate thereunder.

_____, M.D.

My office address to which all communications are to be sent is:

_____

(Please print or typewrite name)

_____

(Street & Number) (City or Town)

(Turn to Page 484)

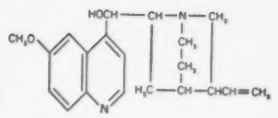
Progress in SYNTHETIC CHEMISTRY
EQUALS
Progress in CHEMOTHERAPEUTICS

"It has a high degree of clinical safety. . . It is considered to be the preferred antimalarial drug for treatment of disorders of connective tissue, because of the low incidence of gastrointestinal distress as compared to that with chloroquine phosphate."[1]

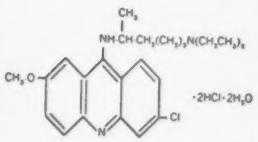
"... Plaquenil is decidedly less toxic and better tolerated by the average patient, even in high dosage, than is chloroquine."[2]

"... the least toxic of its class ..."[3]

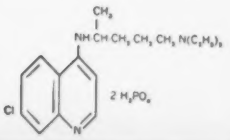
QUININE



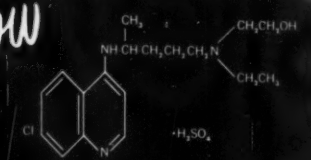
ATABRINE® DIHYDROCHLORIDE



ARALEN® PHOSPHATE



Now



Plaquenil® SULFATE

Remarkably effective in RHEUMATOID ARTHRITIS

SIDE EFFECTS MARKEDLY REDUCED

DOSE: **Initial** – 400 to 600 mg. (2 or 3 tablets) Plaquenil sulfate daily.
Maintenance – 200 to 400 mg. (1 or 2 tablets) daily.

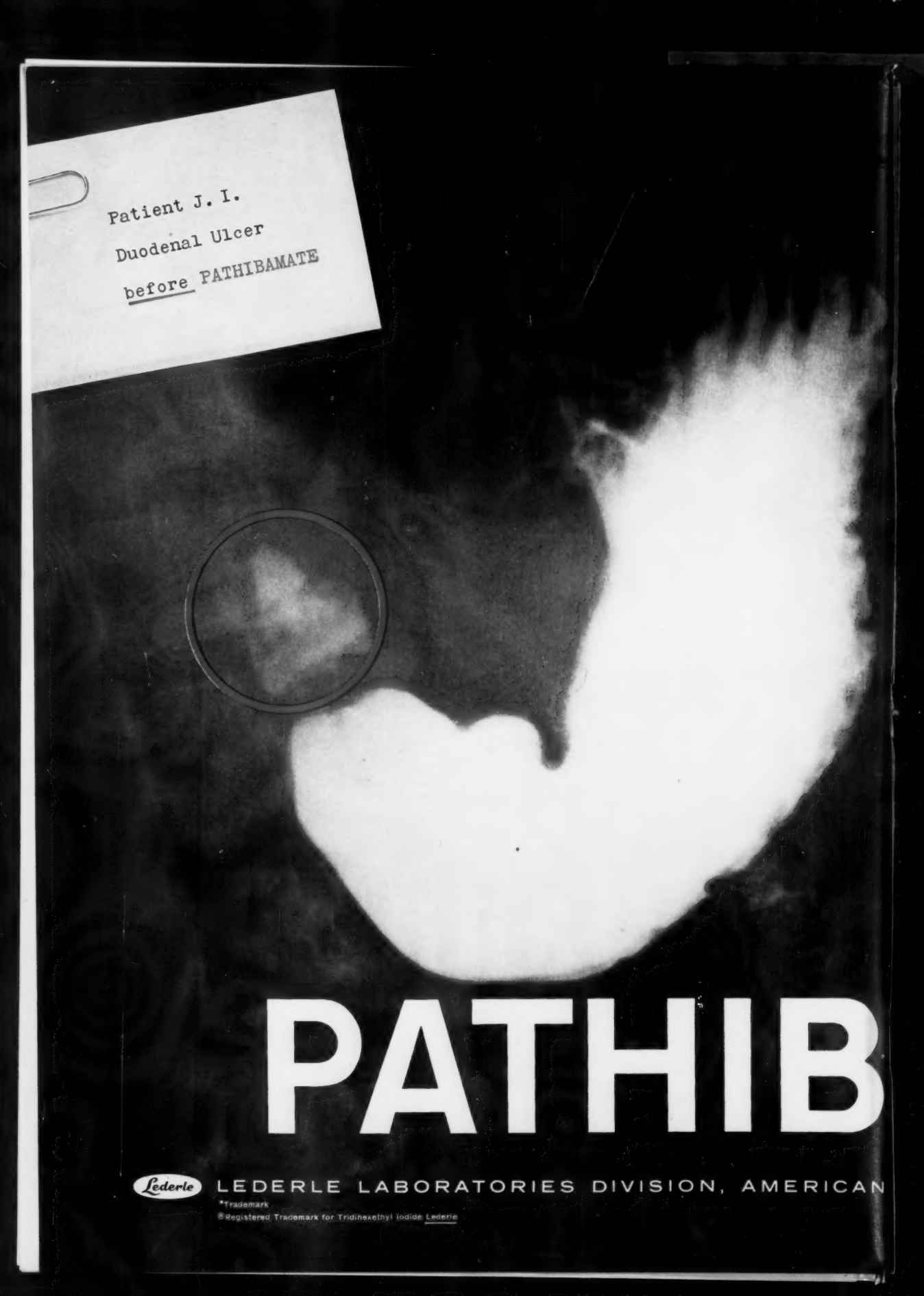
SUPPLIED: Tablets of 200 mg., bottles of 100.

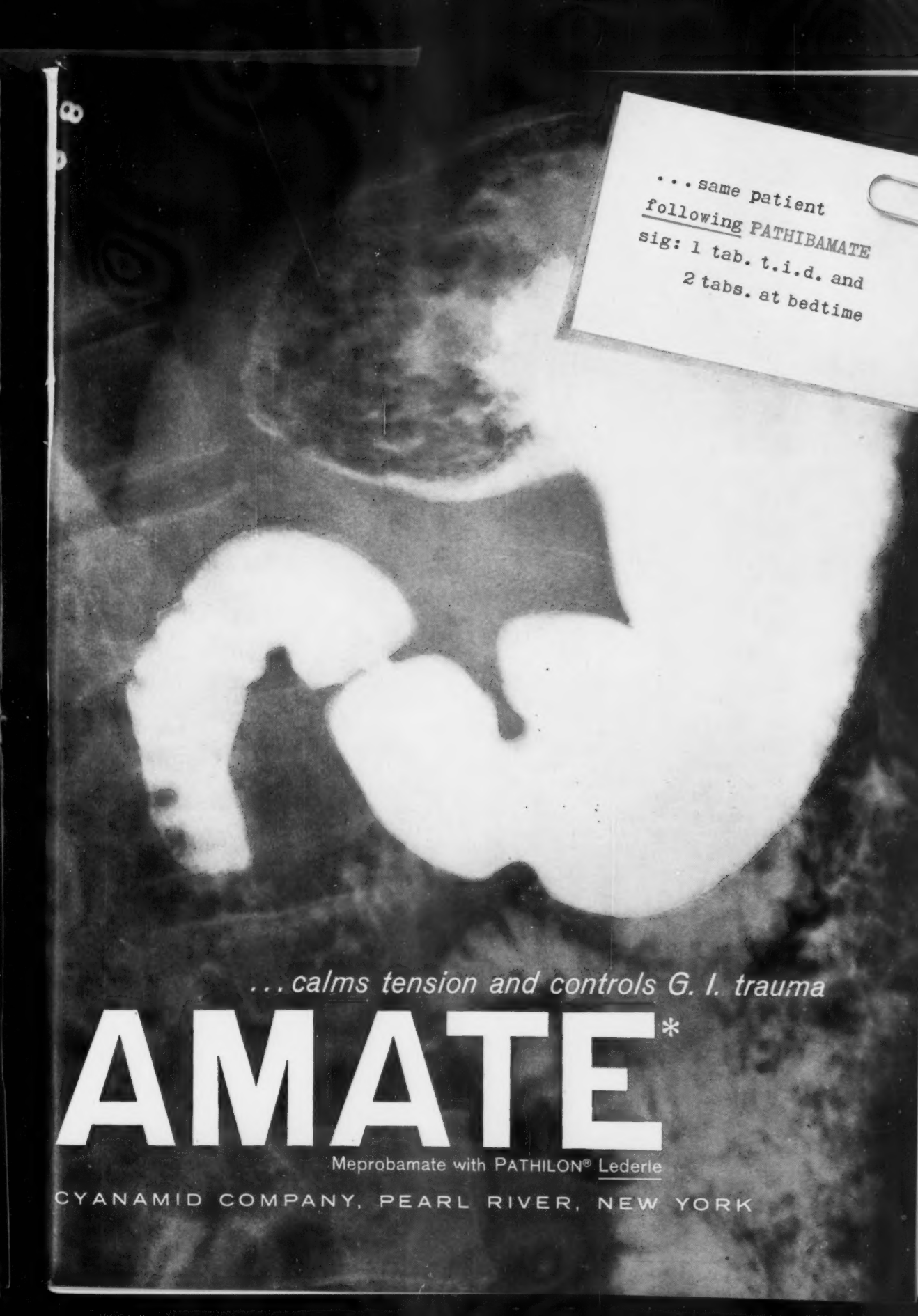
Write for Booklet

Winthrop LABORATORIES NEW YORK 18, N. Y.

REFERENCES:
1. Siberbol, A.L., Schneider, S.L., and Harrison, J.W.: *Cleveland Clin. Quart.* 24:98, Apr., 1957.
2. Sobosh, A.G., and Alexander, L.J.: The Sobosh section, *Bull. A. Mil. Dermatologists* 5:25, Nov., 1956.
3. Cornbleet, Theodore: Arch. Dermat. 73:572, June, 1956.

Atabrine (brand of quinacrine), Aralen (brand of chloroquine), and Plaquenil (brand of hydroxychloroquine), trademarks reg. U.S. Pat. Off.


Patient J. I.
Duodenal Ulcer
before PATHIBAMATE
PATHIB
Lederle
LEDERLE LABORATORIES DIVISION, AMERICAN
*Trademark
®Registered Trademark for Tridihexethyl Iodide Lederle


. . . same patient
following PATHIBAMATE
sig: 1 tab. t.i.d. and
2 tabs. at bedtime
. . . calms tension and controls G. I. trauma
AMATE*
Meprobamate with PATHILON® Lederle
CYANAMID COMPANY, PEARL RIVER, NEW YORK

MEDICARE IDENTIFICATION CARD

Considerable comment and inquiries reflect the need for further clarification in respect to the use of the "Uniformed Services Identification and Privilege Card" (DD Form 1173) subsequent to January 1, 1958.

The primary means of identification continues to be the DD Form 1173. When this identification card is not available and treatment is required under emergency conditions and similar circumstances (to mean those instances in which treatment is necessary for the preservation of life, health, or well-being of the patient, including in general, bodily injuries, medical or surgical conditions, and obstetrical and maternity care) one of the following forms of identification will be acceptable:

(a) Statement of a local commander having knowledge of the sponsor's status that the patient is a bona fide dependent.

(b) Other official uniformed services documents and/or identification cards signed by an official, reflecting the patient as being a dependent eligible for civilian care under Medicare.

(c) Statement of the physician or hospital authority that he has personal knowledge of the identification of the patient, or her dependency status, and eligibility for civilian care under Medicare.

(d) Civilian type identification such as Social Security card, driver's license, et cetera, identifying the party certifying to eligibility in Section III of the claim form as being the individual so stated. When this type of identification is used, care should be exercised in assuring that the name on the identification document used is the same as the name signed in Section III.

Undated or expired cards are not considered acceptable and, in those instances where expired cards are presented, the same provisions apply as if no card were presented.

MICHIGAN CANCER COORDINATING COMMITTEE

MR. CHARLES F. ARNOLD.....Chief Engineer, Cadillac Motor Division, 2860 Clark, Detroit 10
Representing S.E. Michigan Division, American Cancer Society

MR. RUSSELL E. BOWERS..903 Genesee Bank Bldg., Flint
Representing Michigan Division, Inc., American Cancer Society

J. A. COWAN, M.D.....Michigan Dept. of Health, Lansing
Representing Michigan Department of Health

M. A. DARLING, M.D.....673 Fisher Bldg., Detroit
Representing S.E. Michigan Division, American Cancer Society

J. D. HEASLIP, M.D.....Pennock Hospital, Hastings
Representing Michigan Health Officers Association

L. E. HOLLY, M.D.....876 Second St., Muskegon
Representing Michigan Division, Inc., American Cancer Society

J. W. HUBLY, M.D.....1407 2nd Nat'l Bank Bldg., Battle Creek
Representing Michigan State Medical Society

W. A. HYLAND, M.D.....Metz Bldg., Grand Rapids
Representing Michigan State Medical Society

W. A. IRWIN, M.D.....Providence Hospital, Detroit
Representing Michigan State Medical Society

B. E. LUCK, D.D.S.....1512 Mich. Nat'l Tower, Lansing
Representing Michigan State Dental Association

H. M. NELSON, M.D.....1067 Fisher Bldg., Detroit
Representing S.E. Michigan Division, American Cancer Society

C. A. PAYNE, M.D...Blodgett Mem. Hosp., Grand Rapids
Representing Michigan Division, Inc., American Cancer Society

H. M. POLLARD, M.D.....University Hospital, Ann Arbor
Representing Michigan State Medical Society

MEDICAL MEETINGS AND CLINIC DAYS

Spring 1958	MSMS Postgraduate Extramural Courses	Statewide
April 1958		
24-25	Wayne State University 4th Annual Nutrition Conference	Detroit
May 1958		
1	Ingham County Clinic Day	Lansing
6-7	Wayne State University 90th Annual Clinic Day and Alumni Reunion	Detroit
14	Conference on Rehabilitation	MSU, Kellogg Center, East Lansing
June 1958		
11	Sinai Hospital Alumni Day	Detroit
20-21	Upper Peninsula Medical Meeting	Marquette
July 1958		
24-25	Coller-Penberthy Clinic	Traverse City

Relieve moderate or severe pain

Reduce fever

Alleviate the general malaise of upper respiratory infections

'TABLOID'

'EMPIRIN' COMPOUND®

WITH

CODEINE PHOSPHATE*

maximum codeine analgesia/optimum antipyretic action

*Subject to Federal Narcotic Regulations

BURROUGHS WELLCOME & CO. (U.S.A.) INC., Tuckahoe, New York

Symbols OF PROVEN PAIN RELIEF



gr. 1



gr. ½



gr. ¼



gr. ⅛

Formulas for dependable relief...

...from moderate to severe pain complicated by tension, anxiety and restlessness.

'CODEMPIRAL'® NO. 3*



Codeine Phosphate	gr. ½
Phenobarbital	gr. ¼
Acetophenetidin	gr. 2½
Aspirin (Acetylsalicylic Acid)	gr. 3½

'CODEMPIRAL'® NO. 2*



Codeine Phosphate	gr. ¼
Phenobarbital	gr. ¼
Acetophenetidin	gr. 2½
Aspirin (Acetylsalicylic Acid)	gr. 3½

...from pain of muscle and joint origin, simple headache, neuralgia, and the symptoms of the common cold.

'TABLOID'

'EMPIRIN' COMPOUND®



Acetophenetidin	gr. 2½
Aspirin (Acetylsalicylic Acid)	gr. 3½
Caffeine	gr. ½

...from mild pain complicated by tension and restlessness.

'EMPIRAL'®



Phenobarbital	gr. ¼
Acetophenetidin	gr. 2½
Aspirin (Acetylsalicylic Acid)	gr. 3½

*Subject to Federal Narcotic Regulations



BURROUGHS WELLCOME & CO. (U.S.A.) INC., Tuckahoe, New York

promising approach to:
hyper-betalipoproteinemia, hyper-cholesterolemia
and **atherosclerosis**

lufa CAPSULES effectively help to

shift atherogenic beta-lipoproteins
to the more normal alpha-lipoproteins

reduce elevated blood cholesterol levels

normalize chylomicron-lipomicron ratios

stabilize function of the liver, site of normal metabolism of cholesterol, lipoproteins and other lipids

IMPORTANT NEW PRODUCT

lufa
CAPSULES

Lipotropic factors with Unsaturated Fatty Acids (safflower oil)



Each LUFA capsule provides:	
UNSATURATED FATTY ACIDS**	378 mg.
PYRIDOXINE HCl (B_6)	2 mg.
CHOLINE BITARTRATE	233 mg.
dl, METHIONINE	110 mg.
INOSITOL	40 mg.
DESICCATED LIVER	87 mg.
VITAMIN B_{12}	1 mcg.
VITAMIN E (dl, alpha-tocopheryl acetate)	3.5 I.U.

**from specially refined safflower seed oil. Provides approximately 294 mg. of linoleic acid.

dosage: Therapeutic, 6 to 9 capsules, in divided doses. Maintenance, one capsule t.i.d.

supplied: Bottles of 100, 500 and 1000 capsules.

Samples, literature and diet charts for patients on request.

u. s. vitamin corporation • PHARMACEUTICALS
(Arlington-Funk Laboratories, division)
250 East 43rd Street • New York 17, N. Y.

Seminar Draws Record Representation

If knowledge is power, guests who attended the 1958 County Secretaries-Public Relations Seminar are more powerful than ever after absorbing the information presented in Detroit, February 1-2.

Meeting Co-Chairmen John M. Wood, M.D., Mt. Pleasant, and R. W. Teed, M.D., Ann Arbor, reported that a record 71 per cent of the county medical societies were represented at this year's conference.

The seminar opened with a reception on Saturday evening and closed following luncheon on Sunday.

After a "Know Your Neighbor" dinner in the ballroom of the Statler Hotel, Moderator George W. Slagle, M.D., Battle Creek, MSMS president, introduced a panel presentation on "The New Basic Principles Governing Prepayment Contracts—How MSMS is Meeting the Challenge."

So that the overflow crowd might have adequate background information, the presentation recounted the history of prepayment medical care coverage in Michigan from its early beginning up to the present day. The last panelist traced the development of the new prepayment contracts now being drawn by Michigan Medical Service in co-operation with the MSMS Medical Care Insurance Committee.

The panel included L. Fernald Foster, M.D., Detroit, President, Michigan Medical Service; J. C. Ketchum, Detroit, MMS Executive Vice President; H. W. Brenneman, Lansing, MSMS Public Relations Counsel; and Max L. Lichter, M.D., Melvindale, Chairman, MSMS Medical Care Insurance Committee.

At a breakfast meeting on Sunday morning, chaired by D. Bruce Wiley, M.D., MSMS Council Chairman, information on the new MSMS building was presented by W. S. Jones, M.D., Menominee, Chairman of the MSMS Committee on the "Big Look."

Leroy G. Vandeveer, LL.B., Detroit, outlined the new Statement of Principles between M.D.'s and Lawyers in his capacity as Chairman of the Joint Committee with MSMS and the State Bar of Michigan.

Participating in the demonstration of the new MSMS mediation, ethics and grievances procedures were H. T. Knobloch, M.D., Bay City, Secretary, Bay-Arenac-Iosco County Medical Society; J. B. Rowe, M.D., Flint, Secretary, Genesee County Medical Society; Lester P. Dodd, LL.B., Detroit, MSMS Legal Counsel; and William J. Burns, LL.B., Lansing, MSMS Executive Director.

The Public Relations Program was chaired by R. Wallace Teed, M.D., who introduced F. J. L. Blasingame, M.D., Chicago, General Manager, American Medical Association, whose topic was "Pressures, Policies and Public Relations." W. F. Doyle, Lansing, spoke on "The Process of Legislation."

At the closing luncheon, The Honorable Charles E. Chamberlain, Congressman, Sixth District, Lansing, told "What a Congressman Needs to Know About Medicine."

Elected Chairman of the 1959 Seminar to be held next January was J. E. Mahan, M.D., of Allegan.

Those present at the 1958 Seminar included:

County Secretaries.—J. E. Mahan, M.D. (Allegan); Harold Kessler, M.D. (Alpena-Alcona-Presque Isle); E. L. Phelps, M.D. (Barry); H. T. Knobloch, M.D. (Bay-Arenac-Iosco); J. C. Heffelfinger, M.D. (Branch); S. A. Yannitelli, M.D. (Calhoun); T. B. Mackie, M.D. (Chippewa); Joseph L. Riley, M.D. (Eaton); J. B. Rowe, M.D. (Genesee); J. M. Wood, M.D. (Gratiot-Isabella-Clare); F. M. Wessels, M.D. (Hillsdale); C. F. Wible, M.D. (Huron); J. A. Van Loo, M.D. (Ionia-Montcalm); H. W. Porter, M.D. (Jackson); Robert D. Warnke, M.D. (Kalamazoo); James R. Doty, M.D. (Lapeer); Eleanor Skufis, M.D. (Lenawee); R. M. Duffy, M.D. (Livingston); A. W. Suksta, M.D. (Macomb); J. R. Acocks, M.D. (Marquette-Alger); James E. Walters, M.D. (Mecosta-Osceola-Lake); R. A. Frary, M.D. (Monroe); H. C. Tellman, M.D. (Muskegon); Charles L. Oppy, M.D. (North Central); E. F. Crippen, M.D. (Northern Mich.); G. N. Petroff, M.D. (Oakland); Charles G. Kramer, M.D. (Saginaw); Glenn E. Mohney, M.D. (St. Clair); Clark G. Porter, M.D. (St. Joseph); E. W. Blanchard, M.D. (Sanilac); A. E. Parks, M.D. (Van Buren); B. C. Payne, M.D. (Washtenaw); Francis P. Rhoades, M.D. (Wayne).

County Presidents.—James I. Clark, M.D. (Allegan); O. F. Jens, M.D. (Bay-Arenac-Iosco); Harvey L. Moss, M.D. (Branch); Sherwood B. Winslow, M.D. (Calhoun); Wm. B. McWilliams, M.D. (Clinton); Ralph E. Carlson, M.D. (Dickinson-Iron); C. K. Stroup, M.D. (Genesee); A. B. Aldrich, M.D. (Houghton-Baraga-Keweenaw); K. W. Toothaker, M.D. (Ingham); Robert E. Rice, M.D. (Ionia-Montcalm); Harry Greenbaum, M.D. (Jackson); Paul A. Koestner, M.D. (Kalamazoo); Howard G. Benjamin, M.D. (Kent); Thomas K. Buchanan, M.D. (Lapeer); L. C. Stewart, M.D. (Lenawee); J. H. Jewell, M.D. (Macomb); C. D. Barrett, M.D. (Monroe); Harold D. Dykhuizen, M.D. (Muskegon); E. C. Galsterer, M.D. (Saginaw); Henry A. Scovill, M.D. (Washtenaw).

County Presidents-Elect.—A. Peter Brachman, M.D. (Allegan); G. L. Hagelshaw, M.D. (Bay-Arenac-Iosco); Richard C. Crowell, M.D. (Berrien); Leo R. Wickert, M.D. (Gratiot-Isabella-Clare); Jason B. Meads, M.D. (Jackson); J. G. Malone, M.D. (Kalamazoo); Daniel L. Rosseau, M.D. (Macomb); Walter A. Meier, M.D. (Monroe); N. A. Fleishman, M.D. (Muskegon); Robert

(Continued on Page 488)

there is one tranquilizer clearly indicated **in peptic ulcer...**



*Tests in a series of 25 patients show that there is "a definite and distinct lowering [of both volume of secretions and of free hydrochloric acid] in the majority of patients. . . . No patients had shown any increase in gastric secretions following administration of the drug."[1]

Now you have 4 advantages when you calm ulcer patients with ATARAX:

1. ATARAX suppresses gastric secretions; others commonly increase acidity.
2. ATARAX is "the safest of the mild tranquilizers."[2] (No parkinsonian effect or blood dyscrasias ever reported.)
3. It is effective in 9 of every 10 tense and anxious patients.
4. Five dosage forms give you maximum flexibility.

supplied: 10, 25 and 100 mg. tablets, bottles of 100. Syrup, pint bottles. Parenteral Solution, 10 cc. multiple-dose vials.

references: 1. Strub, I. H.: Personal communication. 2. Ayd, F. J., Jr.: presented at Ohio Assembly of General Practice, 7th Annual Scientific Assembly, Columbus, September 18-19, 1957.

Roerig Rx
New York 17, New York
Division, Chas. Pfizer & Co., Inc.

SEMINAR DRAWS RECORD REPRESENTATION

(Continued from Page 486)

R. Wessels, M.D. (Oakland); Donald V. Sargent, M.D. (Saginaw); A. C. Gholz, M.D. (St. Clair); C. I. Owen, M.D. (Wayne).

County Bulletin Editors.—Charles J. Ryan, M.D. (Calhoun); Philip K. Stevens, M.D. (Genesee); W. N. Sisk, M.D. (Kalamazoo); G. E. Braunschneider, M.D. (Kent); Wm. J. Hanley, M.D. (Muskegon); Milton R. Weed, M.D. (Wayne).

County Society Public Relations Chairmen.—John W. Bunting, M.D. (Alpena); A. B. Gwinn, M.D. (Barry); O. J. Johnson, M.D. (Bay-Arenac-Iosco); F. W. Smith, M.D. (Clinton); George E. Anthony, M.D. (Genesee); David Kahn, M.D. (Ingham); Edward C. Lake, M.D. (Jackson); D. P. Moore, M.D. (Kent); Victor Curatolo, M.D. (Macomb); George H. Hopson, M.D. (Menominee); L. E. Grate, M.D. (Northern Michigan); Edgar J. Geist, Jr., M.D. (Oakland); John H. Kitchel, M.D. (Ottawa); John M. Jacobowitz, M.D. (St. Joseph); James H. Graves, M.D. (Shiawassee).

MSMS Council.—W. M. LeFevre, M.D. (Muskegon); B. T. Montgomery, M.D. (Chippewa-Mackinac); E. S. Oldham, M.D. (Gratiot-Isabella-Clare); C. Allen Payne, M.D. (Kent); Donald G. Pike, M.D. (Grand Traverse-Leelanau-Benzie); G. B. Saltonstall, M.D. (Northern Michigan); Ralph W. Shook, M.D. (Kalamazoo).

Executive Secretaries of County Medical Societies.—Ethel M. McWethy, M.D. (Genesee); R. L. Warnshius (Kent); Mrs. F. H. Bartlett (Muskegon); J. O. Devereaux (Oakland); Carl G. King (Saginaw); Else Kolhede (Wayne).

Woman's Auxiliary Representatives.—Mrs. Robert Warnke (Kalamazoo); Mrs. C. Allen Payne (Kent); Mrs. A. B. Aldrich (Houghton); Mrs. Harold Gay (Midland).

(Continued on Page 492)

RECORD OF ATTENDANCE AT MSMS COUNTY SECRETARIES-PUBLIC RELATIONS SEMINAR

February 1-2, 1958

County or District Medical Society	*Pres.*	*Pres.-Elect.*	*Secy.*	*P.R. Chairman*	*Editor*	*MSMS Councilor*	*MSMS P.R. Committee*	*Exec. Secy.*
Allegan	X	X	X	O	N	N	N	N
Alpena-Alcona-Presque Isle	O	O	X	X	N	N	O	N
Barry	O	O	X	X	N	N	O	N
Bay-Arenac-Iosco	X	X	X	X	O	O	X	N
Berrien	O	X	O	O	O	N	N	N
Branch	X	N	X	O	O	O	O	N
Calhoun	X	O	X	O	X	X	O	N
Cass	O	N	X	N	N	N	N	N
Chippewa-Mackinac	O	O	X	O	N	X	O	N
Clinton	X	O	O	X	N	N	N	N
Delta-Schoolcraft	O	O	O	O	N	N	N	N
Dickinson-Iron	X	O	O	N	N	N	N	N
Eaton	O	O	X	O	N	X	N	N
Genesee	X	O	X	X	X	O	XXOO	X
Gogebic	O	O	O	O	N	N	N	N
Grand Traverse-Leelanau-Benzie	O	O	O	O	O	X	O	N
Gratiot-Isabella-Clare	O	X	X	O	N	X	X	N
Hillsdale	O	O	X	N	N	N	N	N
Houghton-Baraga-Keweenaw	X	O	O	O	O	O	N	N
Huron	O	N	X	O	N	N	O	N
Ingham	X	O	O	X	O	O	XO	N
Ionia-Montcalm	X	O	X	O	N	N	N	N
Jackson	X	X	X	X	N	N	N	N
Kalamazoo	O	X	X	O	X	X	O	N
Kent	X	O	O	X	X	X	X	X
Lapeer	X	N	X	O	N	N	N	N
Lenawee	X	O	X	O	N	N	N	N
Livingston	O	O	X	O	N	N	N	N
Luce	O	N	O	N	N	N	N	N
Macomb	X	X	X	X	N	ON	O	N
Manistee	O	O	O	O	N	N	N	N
Marquette-Alger	O	O	X	O	N	N	N	N
Mason	O	N	O	O	N	N	O	N
Mecosta-Osceola-Lake	O	O	X	O	N	N	N	N
Menominee	O	O	O	X	N	N	N	N
Midland	O	O	O	O	N	N	N	N
Monroe	X	X	X	O	N	N	O	N
Muskegon	X	X	X	O	X	X	O	O
Newaygo	O	O	O	O	N	N	N	N
North Central	O	O	X	N	N	N	N	N
Northern Michigan	O	O	X	X	O	X	O	X
Oakland	O	X	X	X	O	N	X	X
Oceana	O	N	O	N	N	N	N	N
Ontonagon	O	O	O	O	N	N	O	N
Ottawa	O	O	O	X	N	N	O	N
Saginaw	X	X	X	O	O	N	O	X
St. Clair	O	X	X	O	N	O	XO	N
St. Joseph	O	O	X	X	N	N	O	N
Sanilac	O	N	X	N	N	N	N	N
Shiawassee	O	O	O	O	N	N	X	N
Tuscola	O	O	O	N	N	N	N	N
Van Buren	O	O	X	O	N	N	O	N
Washtenaw	X	O	X	O	O	O	XO	O
Wayne	O	X	X	O	X	O	XXXXOOOO	O
Wexford-Missaukee	O	O	O	O	O	N	N	N

O—Not Represented; X—Present; N—None.

Others present at the Seminar were: Woman's Auxiliary representatives, 4; Michigan State Medical Assistants Society representatives, 4; Michigan Medical Service representatives, 12; Seminar speakers, 18; guests, 58.

ACHROCIDIN*

TETRACYCLINE-ANTIHISTAMINE-ANALGESIC COMPOUND LEDERLE

A versatile, well-balanced formula capable of modifying the course of common upper respiratory infections . . . particularly valuable during respiratory epidemics; when bacterial complications are likely; when patient's history is positive for recurrent otitis, pulmonary, nephritic, or rheumatic involvement.

Adult dosage for ACHROCIDIN Tablets and new caffeine-free ACHROCIDIN Syrup is two tablets or teaspoonfuls of syrup three or four times daily. Dosage for children according to weight and age.

Available on prescription only.

TABLETS *(sugar coated) Each Tablet contains:*

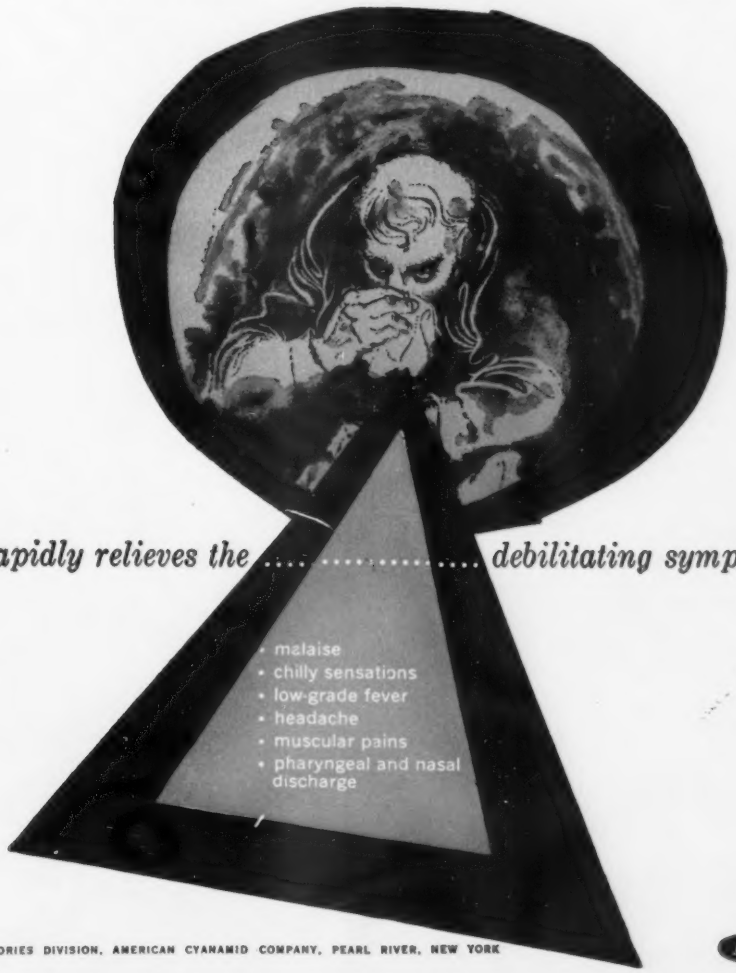
ACHROMYCIN® Tetracycline	125 mg.
Phenacetin	120 mg.
Caffeine	30 mg.
Salicylamide	150 mg.
Chlorothen Citrate	25 mg.

Bottles of 24 and 100.

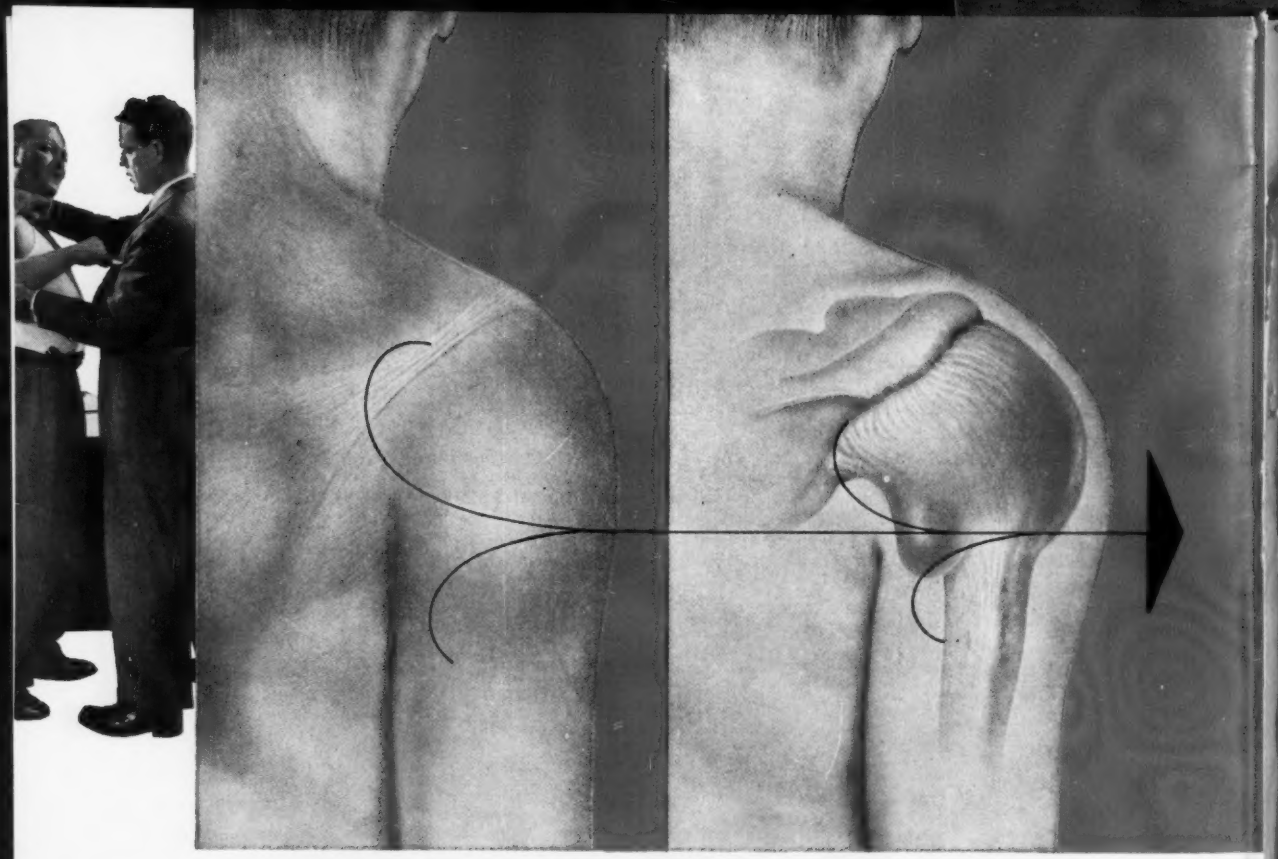
SYRUP *(lemon-lime flavored) Each teaspoonful (5 cc.) contains:*

ACHROMYCIN® Tetracycline equivalent to tetracycline HCl	125 mg.
Phenacetin	120 mg.
Salicylamide	150 mg.
Ascorbic Acid (C)	25 mg.
Pyrilamine Maleate	15 mg.
Methylparaben	4 mg.
Propylparaben	1 mg.

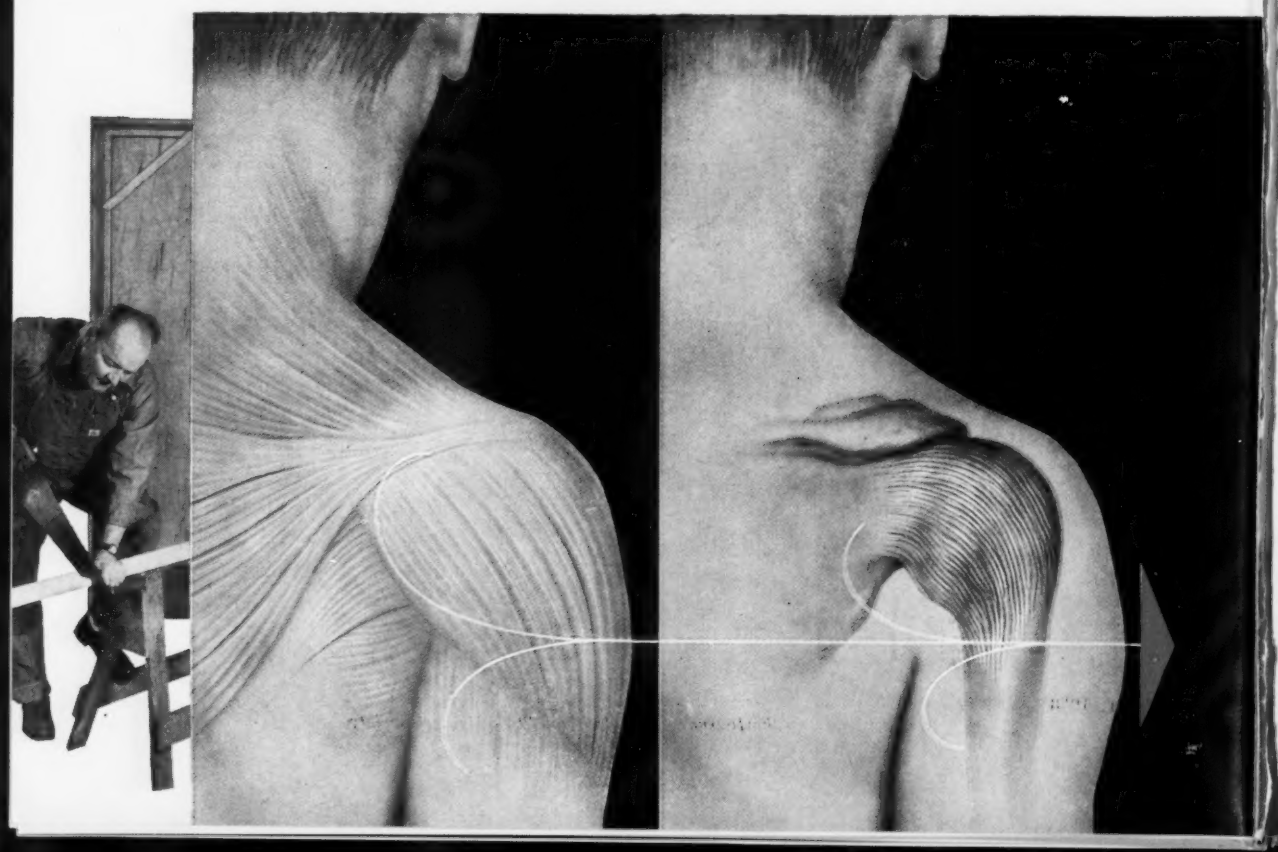
Bottle of 4 oz.



LEDERLE LABORATORIES DIVISION, AMERICAN CYANAMID COMPANY, PEARL RIVER, NEW YORK
*Trademark



"Rheumatoid arthritis is a constitutional disease with symptoms affecting chiefly joints and muscles."[1] "Pain in the affected joint is accompanied by splinting of the adjacent muscles, with resultant 'muscle spasm.' "[2]



rheumatoid arthritis involves both joints and muscles only

MEPROLONE is the only anti-rheumatic-antiarthritic designed to relieve simultaneously (a) muscle spasm (b) joint-muscle inflammation (c) physical distress . . . and may thereby help prevent deformity and disability in more arthritic patients to a greater degree than ever before.

SUPPLIED: Multiple Compressed Tablets in two formulas:
MEPROLONE-2—2.0 mg. prednisolone, 200 mg. meprobamate and 200 mg. dried aluminum hydroxide gel (bottles of 100).
MEPROLONE-1—supplies 1.0 mg. prednisolone in the same formula as MEPROLONE-2 (bottles of 100).

1. Comroe's Arthritis: Hollander, J. L., p. 149 (Fifth Edition, Lea & Febiger, Philadelphia, Pa. 1953).
2. Merck Manual: Lyght, C. E., p. 1102 (Ninth Edition, Merck & Co., Inc., Rahway, N. J. 1956).

MEPROLONE®

THE FIRST MEPROBAMATE PREDNISOLONE THERAPY

meprobamate to relieve muscle spasm
prednisolone to suppress inflammation

relieves both muscle spasm and joint inflammation

MERCK SHARP & DOHME Philadelphia 1, Pa.
Division of MERCK & CO., Inc.

SEMINAR DRAWS RECORD REPRESENTATION

(Continued from Page 488)

Michigan State Medical Assistants Society Representatives.—Reta V. Shedd (Calhoun); Donna Hislop (Muskegon); Hallie Cummins (Tuscalo); Marlouise Redman (Wayne).

MSMS Public Relations Committee.—W. G. Gamble, M.D. (Bay-Arenac-Iosco); A. C. Pfeifer, M.D. (Genesee); W. Z. Rundles, M.D. (Genesee); F. C. Brace, M.D. (Kent); Eugene L. Spoehr, M.D. (Oakland); F. E. Ludwig, M.D. (St. Clair); Claude L. Weston, M.D. (Shiawassee); Victor M. Zerbi, M.D. (Washtenaw); Sidney E. Chapin, M.D. (Wayne); Russell F. Fenton, M.D. (Wayne); E. C. Long, M.D. (Wayne); Glenn E. Millard, M.D. (Wayne).

Participants on the Program.—F. J. L. Blasingame, M.D. (Chicago); Wm. J. Burns (Lansing); H. W. Brenneman (Lansing); The Honorable Charles E. Chamberlain (Lansing); Lester P. Dodd (Detroit); W. F. Doyle (Lansing); L. Fernald Foster, M.D. (Detroit); W. S. Jones, M.D. (Menominee); J. C. Ketchum (Detroit); M. L. Lichter, M.D. (Melvindale); George W. Slagle, M.D. (Battle Creek); R. W. Teed, M.D. (Ann Arbor); Leroy G. Vandeveer, LL.B. (Detroit); D. Bruce Wiley, M.D. (Utica).

Guests.—Henry Alexander (Detroit); Mrs. George Anthony (Flint); Grace Auer (E. Lansing); Herb Auer (E. Lansing); Rudy Bolich (Marquette); Wm. Boyles (Detroit); Russ Burns (Detroit); R. D. Cecconi, M.D. (Iron Mountain); Arthur Clements (Detroit); J. M. Cook, M.D. (Charlotte); Versa V. Cole (Tuscola); Verne Collett (Wayne); W. T. Coulter (St. Paul, Minn.); Arthur L. Crampton (Lansing); Mrs. Richard C. Crowell (St. Joseph); Mrs. Jinny Curatolo (Mt. Clemens); J. A. Doherty (Lansing); Mrs. Harold Dykhuizen (Muskegon); Lucille Fenton (Detroit); Mrs. W. G. Gamble (Bay City); L. G. Goodrich (Detroit); Jean A. Graves (Owosso); Earl E. Hamilton (Traverse City); Virginia Hamilton (Traverse City); Harvey C. Hansen, M.D. (Calhoun); Stella Hansen (Battle Creek); Wilfrid Haughey, M.D. (Battle Creek); Mrs. Paul Ivkovich (Reed City); Paul Ivkovich, M.D. (Reed City); Alfred Jackson (Chicago); Mrs. O. J. Johnson (Bay City); Mrs. David Kahn (Lansing); Daniel J. Kehoe (Detroit); John Lindsey (Oradell, N. J.); Dorothy Long (Detroit); Jane Ludwig (Port Huron); Mrs. T. B. Mackie (Sault Ste. Marie); B. L. Masters, M.D. (Detroit); W. G. McClimans (Grand Rapids); Richard M. McDermott (Detroit); R. H. McDonough (Grand Rapids); Mrs. Walter A. Meier (Monroe); Janet Mitchell (Wayne); Mrs. D. P. Moore (Grand Rapids); Mrs. B. T. Montgomery (Sault Ste. Marie); Robert M. Morse (Traverse City); John Nelson (Detroit); J. Irwin Nichols (Lansing); Harry Parke (Lansing); Tom Paton (Detroit); Betty Porter (Three Rivers); R. E. Reagan, M.D. (Benton Harbor); Mrs. Agnes Reagan (Benton Harbor); Chuck Rickett (Detroit); Howard Robinson, M.D. (Detroit); Mrs. H. Robinson (Detroit); Mrs. Daniel L. Rousseau (Mt. Clemens); Mrs. John Rowe (Flint); Clark W. Royer, M.D. (Calhoun); Phyllis Royer (Battle Creek); Mrs. Charles J. Ryan (Battle Creek); D. F. Sarapo, M.D. (Adrian); Lois Sarapo (Adrian); Helen Schick (Detroit); Edward Shadduck (Detroit); Mrs. Ralph Shook (Kalamazoo); Mrs. W. N. Sisk (Kalamazoo); Mrs. P. Stevens (Flint); Mrs. L. C. Stewart (Adrian); Kay Topp (Detroit); John E. Verbiest (Detroit); Mrs. James E. Walters (Big Rapids); Mrs. M. R. Weed (Detroit); Ruth C. Weston (Owosso); Warren G. White (Muskegon); Mrs. Sherwood Winslow (Battle Creek).

PMB-200

"Premarin" with Meprobamate new potency

Each tablet contains 0.4 mg. "Premarin," 200 mg. meprobamate

For undue emotional stress in the menopause

WRITE SIMPLY...



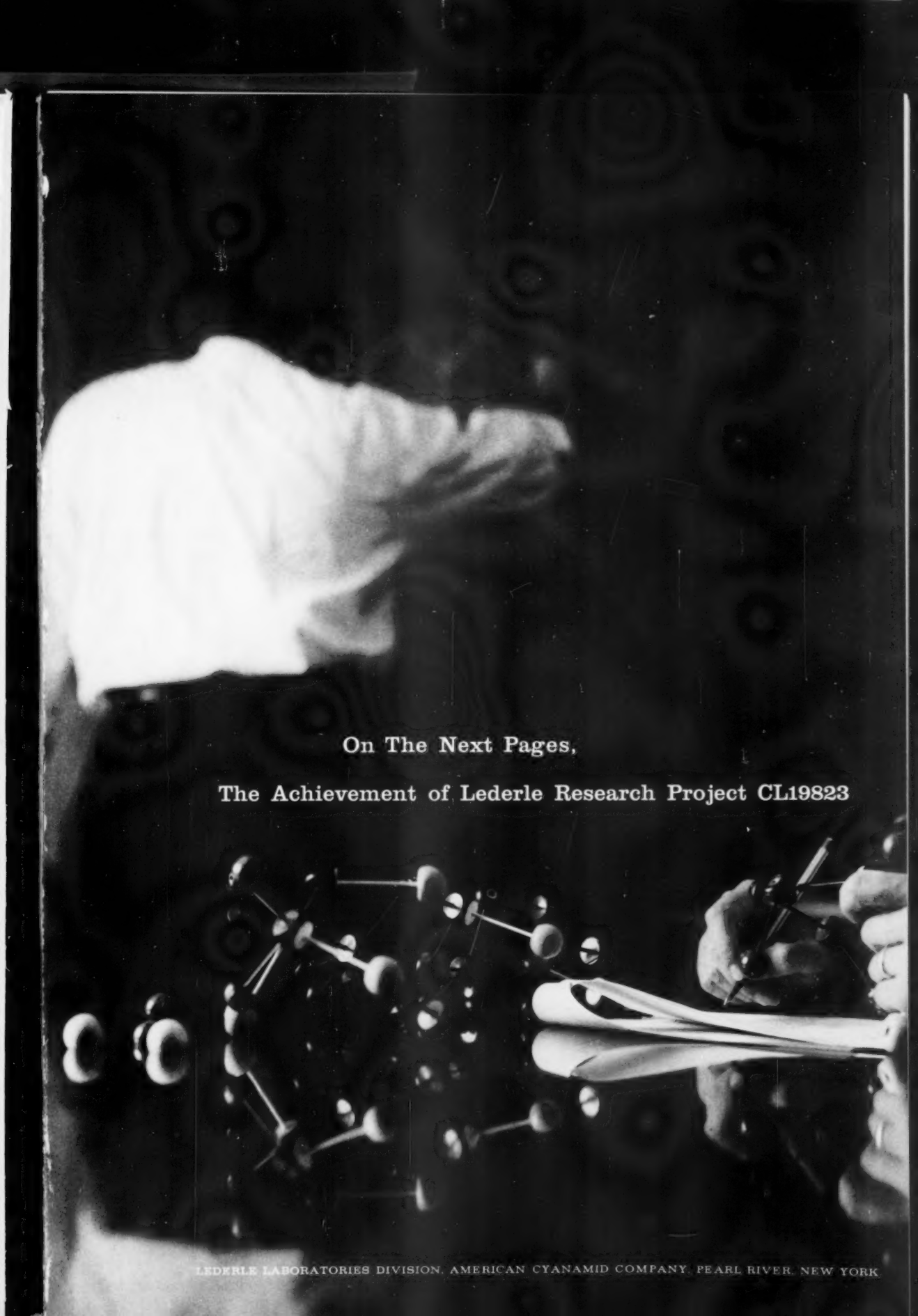
Also available as PMB-400 (0.4 mg. "Premarin," 400 mg. meprobamate in each tablet).

Supply:
No. 880, PMB-200 bottles of 60 and 500.
No. 881, PMB-400 bottles of 60 and 500.

AYERST LABORATORIES • New York 16, New York • Montreal, Canada

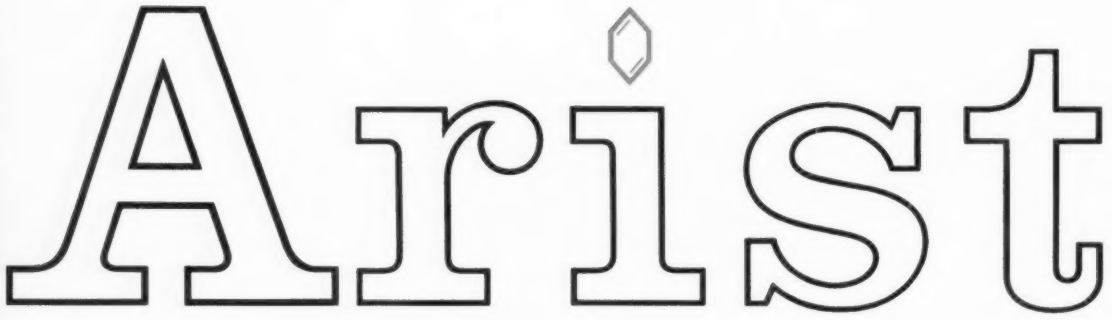
Ayerst

"Premarin®" conjugated estrogens (equine) Meprobamate licensed under U.S. Pat. No. 2,724,720 5830

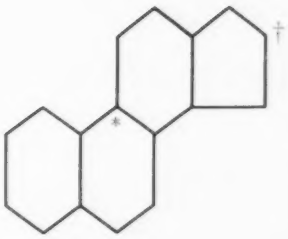


LEDERLE LABORATORIES DIVISION, AMERICAN CYANAMID COMPANY, PEARL RIVER, NEW YORK

Lederle announces a major drug with great new promise



a new corticosteroid created to minimize
major deterrents to all previous steroid therapy



ocort®

Triamcinolone LEDERLE

9 alpha-fluoro-16 alpha-hydroxyprednisolone

Lederle

- **a new high** in anti-inflammatory effects with lower dosage (averages 1/3 less than prednisone)
- **a new low** in the collateral hormonal effects associated with all previous corticosteroids
  - No sodium or water retention
  - No potassium loss
  - No interference with psychic equilibrium
  - Low incidence of peptic ulcer and osteoporosis

Biological Effects of Aristocort

with

particular emphasis

on:

Kidney function

Animal studies on ARISTOCORT[1] have not demonstrated any interference with creatinine or urea clearance. Autopsy surveys of organs of animals on prolonged study of this medication have shown no renal damage.

Sodium and water

ARISTOCORT produced an increase of 230 per cent of water diuresis and 145 per cent sodium excretion when compared to control animals.[1] Metabolic balance studies in man revealed an average negative sodium balance of 0.8 Gm. per day throughout a 12-day period on a dosage of 30 mg. per day.[2] Additional balance studies showed actual sodium loss when ARISTOCORT was given in doses of 12 mg. daily.[3] Other investigators observed significant losses of sodium and water during balance studies and that those patients with edema from some older corticosteroids lost it when transferred to ARISTOCORT.[4,5] In two studies of various rheumatic disorders (194 cases) on prolonged treatment, sodium and water retention was not observed in a single case.[6,7]

Potassium and chlorides

There was no active excretion of potassium or chloride ions in animals given maintenance doses of ARISTOCORT 25 times that found to be clinically effective.[1] Potassium balance studies in humans[2,3] revealed that negative balance did not occur even with doses somewhat higher than those employed for prolonged therapy in rheumatoid arthritis. Hypokalemia, hyperkalemia or hypochloremia did not occur, when tested, in 194 patients with rheumatoid arthritis treated for up to ten and one-half months.[6,7]

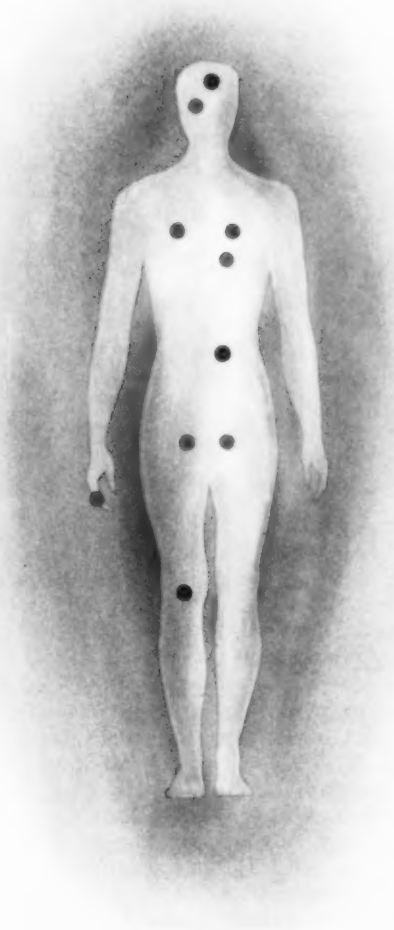
Calcium and phosphorus

Phosphate excretion in animals[1] was not changed from normal even with amounts 25 times greater (by body weight) than those known to be clinically effective. Human metabolic balance studies[3] demonstrated that no change in calcium excretion occurred on dosages usually employed clinically when the compound is administered for its anti-inflammatory effect. Even at a dosage level twice this, slight negative balance appeared only during a short period.

Protein and nitrogen balance

Positive nitrogen balance was maintained during a human metabolic study on maintenance dosage of 12 mg. per day.[3] At dosages two to three times normal levels, positive balance was maintained except for occasional short periods in metabolic studies of several weeks' duration.[2,3]

There was always a tendency for normalization of the A/G ratio and elevation of blood albumin when ARISTOCORT was used in treating the nephrotic syndrome.[8]



Liver glycogen deposition and inflammatory processes

An intimate correlation exists between the ability of a corticosteroid to cause deposition of glycogen in the liver and its capacity to ameliorate inflammatory processes.

In animal liver glycogen studies, relative potencies of ARISTOCORT over cortisone of up to 40 to 1 have been observed. Compared to ARISTOCORT, five to 12 times the amount of prednisone is required to produce varying but equal amounts of glycogen deposition in the liver.[1]

Most patients show normal fasting blood sugars on ARISTOCORT. Diabetic patients on ARISTOCORT may require increased insulin dosage, and occasional latent diabetics may develop the overt disease.

Anti-inflammatory potency of ARISTOCORT was determined by both the asbestos pellet[1] and cottonball[9] tests. It was found to be nine to 10 times more effective than hydrocortisone in this respect.

Gastric acidity and pepsin

The precise mode of ulcerogenesis during treatment with corticosteroids is not known. There is much experimental evidence for believing this may be related to the tendency of these agents to increase gastric pepsin and acidity—and this cannot be abolished by vagotomy, anticholinergic drugs or gastric antral resection.[10] Clinical studies[11] of patients on ARISTOCORT revealed that uropepsin excretion is not elevated. Further, their basal acidity and gastric response to histamine stimulation were within normal limits.

Central nervous system

The tendency of corticosteroids to produce euphoria, nervousness, mental instability, occasional convulsions and psychosis is well known.[12] The mechanism underlying these disturbances is not well understood.

ARISTOCORT, on the contrary, does not produce a false sense of well being, insomnia or tension except in rare instances. In the treatment of 824 patients, for up to one year, not a single case of psychosis has been produced. In general, it appears to maintain psychic equilibrium without producing cerebral stimulation or depression.

Bibliography

1. Experimental Therapeutics Section, Lederle Laboratories. To be published. 2. Bunim, J. J., Whedon, G., and Black, R. L.: Personal Communication. 3. Hellman, L., Zumoff, B., Schwartz, M. K., Gallagher, T. F., Berntsen, C. A., and Freyberg, R. H.: Antirheumatic and Metabolic Effects of a New Synthetic Steroid, paper quoted in Bull. Rheumat. Dis. 7: 130, 1957. 4. Spies, T. D.: South. M. J. 50: 216, (Feb.) 1957. 5. Freyberg, R. H.: Personal Communication. 6. Freyberg, R. H., Berntsen, C. A., and Hellman, L.: Paper presented at the International Congress on Rheumatic Diseases, Toronto, June 25, 1957. 7. Hartung, E. F.: To be published. 8. Hellman, L., Zumoff, B., Kretschmer, N. and Kramer, B.: Personal Communication. 9. Dorfman, R. I., and Dorfman, A. S.: Personal Communication. 10. Gray, S. J., Ramsey, C. G., Villarreal, R., and Krakauer, L. J.: Edited by H. Selye and G. Heuser in: Fifth Annual Report on Stress, 1955-56. M.D. Publications, Inc., New York, 1956, p. 138. 11. Dubois, E. L.: Personal Communication. 12. Good, R. A., Vernier, R. L., and Smith, R. T.: Pediatrics *19*:95, 1957.

Lederle

The Promise of Aristocort in Reduction of Side Effects

It is axiomatic to affirm that the undesirable collateral hormone effects of corticosteroids increase in frequency and severity the higher the dosage and the longer used.

It has also become well recognized that the most serious of the major side effects from long-term corticosteroid treatment are peptic ulcers, osteoporosis with fracture, drug psychosis and euphoria, and sodium and water retention leading often to general tissue edema and hypertension.

It is significant that of the close to 400 patients on the lower dosage schedules found effective in bronchial asthma and dermatologic conditions, only 1 case of peptic ulceration has developed. No other of the above side effects have been observed even though ARISTOCORT was administered continuously to them for periods as long as one year.

The treatment of rheumatoid arthritis with steroids appears to result in the highest incidence of side effects. For this reason, the side effects associated with ARISTOCORT therapy in 292 patients with rheumatoid arthritis are reported below.

Peptic Ulcer

The occurrence of peptic ulcer in 292 patients with rheumatoid arthritis treated continuously for up to one year with ARISTOCORT is approximately 1 per cent (2 of the 3 occurred in patients transferred from prednisone). In the remaining 532 cases recently analyzed, only one ulcer has been discovered in a patient who apparently had no ulcer when he was changed from another steroid.

Osteoporosis and Compression Fractures

The occurrence of osteoporosis with compression fracture in 292 patients with rheumatoid arthritis treated continuously for up to one year with ARISTOCORT is 0.33 per cent (1 case[1]). Although these results are encouraging, determination of the true incidence of osteoporosis will have to await the passage of more time.

Euphoria and Psychosis

The euphoria so commonly produced by all previous corticosteroids has seemed a most desirable attribute to patients. In penalty, however, they have often later to pay for this by mental disturbances, varying from mild and transitory to severe depression and psychosis,[2] and toxic syndromes producing even convulsions and death.[3]

Since the onset of these complications is not directly related to duration of steroid administration,[4] the fact that not one case of psychosis occurred in 824 patients treated with ARISTOCORT, is most encouraging.

Sodium Retention—Hypertension-Potassium Depletion

When 17 patients were changed from prednisone to ARISTOCORT, 11 rapidly lost weight although only one had had visible edema.[5] Sodium and water retention, hypokalemia or hyperkalemia and steroid hypertension did not appear in 194 rheumatoid arthritis patients treated with ARISTOCORT.[1,6]

The interrelation between blood and body sodium, and steroid hypertension has long been generally appreciated.[7,8] Except in rare instances, or when unusually high doses are used (e.g., leukemia), the problem of edema and hypertension caused by sodium and water retention, has been eliminated with ARISTOCORT.

Minor Side Effects

Collateral hormonal effects of less serious consequence occurred with approximately the same frequency as with the older corticosteroids.[1] These include erythema, easy bruising, acne, hypertrichosis, hot flashes and vertigo. Several investigators have reported symptoms not previously described as occurring with corticosteroid therapy, e.g., headaches, lightheadedness, tiredness, sleepiness and occasional weakness.

Moon facies and buffalo humping have been seen in some patients on ARISTOCORT. However, ARISTOCORT therapy, in many instances, resulted in diminution of "Cushingoid" signs induced by prior therapy. Where this occurs, it may be related to reduced dosage on which patients can be maintained.

Reduction of dosage by one-third to one-half

In a double-blind study of comparative dosage in patients with rheumatoid arthritis,[9] 70 per cent of the cases were as well controlled on a dose of ARISTOCORT one-half that of prednisone. A general recommendation can be made that ARISTOCORT be used in doses two-thirds that of prednisone or prednisolone in the treatment of rheumatoid arthritis. There are individual variations, however, and each patient should be carefully titrated to produce the desired amount of disease suppression.

Comparative studies, of patients changed from prednisone, indicate reduced dosage of ARISTOCORT in bronchial asthma and allergic rhinitis (33 per cent),[5] and in inflammatory and allergic skin diseases (33-50 per cent).[10,11]

General Precautions and Contraindications

Administration of ARISTOCORT has resulted in lower incidence of major serious side effects, and in fewer of the troublesome minor side effects known to occur with all previously available corticosteroids. However, since it is a highly potent glucocorticoid, with profound metabolic effects, all traditional contraindications to corticosteroid therapy should be observed.

No precautions are necessary in regard to dietary restriction of sodium or supplementation with potassium.

Since ARISTOCORT has less of the traditional side effects, the appearance of sodium and water retention, potassium depletion, or steroid hypertension cannot be used as signs of overdosage. As a rule patients will lose some weight during the first few days of treatment as a result of urinary output, but then the weight levels off.

Patients do not develop the abnormally voracious appetite common to previous corticosteroid administration. In fact, some patients experienced anorexia, and it is advisable to inform patients of this and to recommend they maintain a normal intake of food, with emphasis on liberal protein intake.

While precipitation of diabetes, peptic ulcer, osteoporosis, and psychosis can be expected to appear rarely from ARISTOCORT, they must be searched for periodically in patients on long-term steroid therapy.

Traditional precautions should be observed in gradually discontinuing therapy, in meeting the increased stress of operation, injury and shock, and in the development of intercurrent infection.

There is one overriding principle to be observed in the treatment of any disease with ARISTOCORT. *The amount of the drug used should be carefully titrated to find the smallest possible dose which will suppress symptoms.*

Bibliography

1. Freyberg, R. H., Berntsen, C. A., and Hellman, L.: Paper presented at International Congress on Rheumatic Diseases, Toronto, June 25, 1957. 2. Bunim, J. J.: Bull. New York Acad. Med. 33:461, 1957. 3. Good, R. A., Vernier, R. L., and Smith, R. T.: Pediatrics 19:95, 1957. 4. Goolker, P., and Schein, J.: Psychosom. Med. 15:589, 1953. 5. Sherwood, H., and Cooke, R. A.: J. Allergy 28:97, 1957. 6. Hartung, E. F.: Personal Communication. 7. Schroeder, H. A.: J.A.M.A. 162:1362, 1956. 8. Thorn, G. W., Laidlaw, J. C., and Goldfein, A.: Ciba Found. Coll. on Endocrinology, J. & A. Churchill, Ltd., London, 8:343, 1955. 9. Freeman, H., Bachrach, S., McGilpin, H. H., and Dorfman, R. I.: Personal Communication. 10. Rein, C. R., Fleischmajer, R., and Rosenthal, A.: J.A.M.A. 165:1821, 1957. 11. Shelley, W. B., and Pillsbury, D. M.: Personal Communication.

The Promise of Aristocort in Rheumatoid Arthritis

ARISTOCORT *therapy has been intensely and extensively studied for periods up to one year on 292 patients with rheumatoid arthritis.*

Significant is the fact that most patients were *severe* arthritics, transferred to ARISTOCORT from other corticosteroids because satisfactory remission had not been attained, or because the seriousness of collateral hormonal effects had made discontinuance desirable.

Results of treatment

Freyberg and associates[1] treated 89 patients with rheumatoid arthritis (A. R. A. Class II or III and Stage II or III). Of these, 51 were on ARISTOCORT therapy from three to over 10 months. In all but a few patients, satisfactory suppression of rheumatoid activity was obtained with 10 mg. per day. Thirteen were controlled on 6 mg. or less a day, and for periods to 180 days. The investigators reported therapeutic effect in most cases to be A. R. A. Grade II (impressive) and that marked reduction in sedimentation rates occurred.

Another interesting observation in this study: Of the 89 patients treated, 12 had active ulcers, developed from prior steroid therapy. *In six patients, the ulcers healed while on doses of* ARISTOCORT *sufficient to control arthritic symptoms.*

Hartung[2] treated 67 cases of rheumatoid arthritis for up to 10 months. He found the optimum maintenance dose to be 11 mg. per day. Nineteen of these patients were treated for six to 10 months with an "excellent" therapeutic response.

Dosage and course of therapy

The initial dosage range recommended is 14 to 20 mg. per day—depending on the severity and acuteness of signs and symptoms. Dosage is divided into four parts and given with meals and at bedtime. Anti-rheumatic effect may be evident as early as eight hours, and full response often obtained within 24 hours. This dosage schedule should be continued for two or three days, or until all acute manifestations of the disease have subsided, whichever is later.

The maintenance level is arrived at by reduction of the total daily dosage in decrements of 2 mg. every three days. The range of maintenance therapy has been found to be from 2 mg. to 15 mg. per day—with only a very occasional patient requiring as much as 20 mg. per day. Patients requiring more than this should not be long continued on steroid therapy.

The aim of corticosteroid therapy in rheumatoid arthritis is to suppress the disease only to the stage which will enable the patient to carry out the required activities of normal living or to obtain reasonable comfort. The maintenance dose of ARISTOCORT to achieve this end is arrived at while making full use of all other established methods of controlling the disease.

ARISTOCORT is available in 2 mg. scored tablets (pink); 4 mg. scored tablets (white). Bottles of 30.

Bibliography

1. Freyberg, R. H., Berntsen, C. A., and Hellman, L.: Paper presented at International Congress on Rheumatic Diseases, Toronto, June 25, 1957. 2. Hartung, E. F.: Paper presented at Florida Academy of General Practice, St. Petersburg, Florida, Nov. 2, 1957.

Lederle

The Promise of Aristocort in Respiratory Allergies

About 200 patients with respiratory allergies have been treated with ARISTOCORT *for continuous periods up to eight months.*

Results of treatment

Sherwood and Cooke[1,2] gave ARISTOCORT to 42 patients with bronchial asthma and allergic rhinitis. Average dose needed to control the asthmatic group was approximately 6 mg. per day (range, 2 to 14 mg.). Results, which were called "good to excellent" in all but four, were achieved on one-third less than similarly effective doses of prednisone or prednisolone.

The investigators noted other major improvements in ARISTOCORT therapy over the older steroids. There was no increase in blood pressure in any patient: *on the contrary, in 12 patients, there was reduction of pressure when they were transferred to* ARISTOCORT. One patient had required auxiliary antihypertensive drug therapy; over a nine-week period on ARISTOCORT, the pressure gradually fell from 206/100 to 136/79. In another case, the pressure slowly dropped from 205/105 to 154/86.

The number of cases in which these investigators tried ARISTOCORT in allergic rhinitis was not large enough to provide significant averages. However, the range of effective therapy was from 2 to 6 mg. per day. These strikingly low daily doses resulted in control of all signs and symptoms.

Schwartz[3] treated 30 patients with chronic, intractable bronchial asthma. At an average daily dose of 7 mg., he reported "good to excellent" results in all but one. Spies,[4] Barach[5] and Segal,[6] reported similar results at average daily maintenance doses of 4 to 10 mg. of ARISTOCORT.

Dosage and course of therapy

The initial dosage range recommended is 8 to 14 mg. of ARISTOCORT daily. Although a rare, very severe case may require more than this on the first day of therapy, these dosages will usually result in prompt alleviation of dyspnea, wheezing and cyanosis. Patients are soon able to carry out a normal span of daily activity.

The maintenance level is arrived at by reduction of the total daily dose every three days in decrements of 2 mg.; in the over-all series, the average daily dose for bronchial asthma is approximately 8 to 10 mg. and for allergic rhinitis, 2 to 6 mg. per day. All total daily doses should be divided into four parts and given with meals and at bedtime. As in every condition where corticosteroids are employed, each patient's treatment should be individualized and the maintenance arrived at by careful titration against signs and symptoms of disease.

Patients with chronic bronchial asthma may require steroid therapy for several months. And since asthma may be associated with cardiac disease, especially in the older age groups, ARISTOCORT is particularly useful because of its ability to cause excretion of sodium and water.

ARISTOCORT is available in 2 mg. scored tablets (pink); 4 mg. scored tablets (white). Bottles of 30.

Bibliography

1. Sherwood, H., and Cooke, R. A.: J. Allergy 28:97, 1957. 2. Sherwood, H., and Cooke, R. A.: Personal Communication. 3. Schwartz, E.: Personal Communication. 4. Spies, T. D.: Personal Communication. 5. Barach, A. L.: Personal Communication. 6. Segal, M. S.: Personal Communication.

Lederle

The Promise of Aristocort

in Nephrotic Syndrome

Fourteen patients with the nephrotic syndrome have been treated with ARISTOCORT *for continuous periods of up to six weeks.*

Results of treatment

Hellman and associates[1,2] noted that ARISTOCORT, because of its favorable electrolyte effects, may well be the most desirable steroid to date in treatment of the nephrotic syndrome. However, thus far its use has been reported in only 14 children, of whom 8 had a complete diuresis and disappearance of all abnormal chemical findings. Four of the patients had diuresis, but continued to show some abnormal chemical findings, while two patients with signs of chronic renal disease failed to respond.

Dosage and course of therapy

In order to produce maximal response, 20 mg. should be given daily until diuresis occurs. The dose should then be decreased gradually and maintained around 10 mg. a day. After the patient has been in remission for some time, it may be advisable to diminish the dose gradually and discontinue ARISTOCORT.

in Pulmonary Emphysema and Fibrosis

Eleven patients with pulmonary emphysema and/or fibrosis were treated with ARISTOCORT *for continuous periods of over two months.*

Results of treatment

Only small series of cases observed by Barach,[3] Segal,[4] and Cooke,[5] are available. Barach treated patients who were not adequately controlled by prednisone, with the same dose of ARISTOCORT with significant improvement.

Dosage and course of therapy

The initial suppressive dose range recommended is 10-14 mg. daily. Frequently, there is a prompt decrease in cyanosis and dyspnea, with increase in vital capacity.

The average maintenance dose level was 8 mg. a day. If it is desired to maintain a patient on continuous therapy for some months, dosages as low as 2 mg. a day have been successful. All decreases in dosage should be gradual and at a rate of 2 mg. decrements in total daily amount, every two to four days. The daily dosage is divided into four parts and given with meals and at bedtime.



in Neoplastic Diseases

Forty-four children and adults have been given ARISTOCORT *for palliative treatment of acute leukemia, chronic lymphatic leukemia, lymphosarcoma, lympholeukosarcoma and Hodgkin's disease.*

Results of treatment

Farber[6] has treated 22 children with acute leukemia for an average of three weeks. Of the 17 observed long enough to judge the efficacy of the medication, he rated five as excellent, three as good, two as fair and seven as poor responses.

Hellman and associates[7] gave ARISTOCORT to a group of patients with the various lymphomas in doses of 40 to 50 mg. a day—occasionally up to 100 milligrams. Treatment was continued in some cases for 17 weeks. Response was classified as good for the palliative purposes for which the drug was given.

Dosage and course of therapy

Massive initial suppressive doses of 40 to 50 mg. per day in children (1 mg./kg./day) and up to 100 mg. a day in adults have been administered.

Responses to any specific dosage in these conditions vary so widely that only a general dosage range can be indicated. Treatment must be individualized; rate of reduction in dosage and determination of maintenance levels cannot be categorized.

Miscellaneous

Patients with various other diseases have been treated by several clinical investigators. These include patients with osteoarthritis, acute bursitis, rheumatic fever, spondylitis, other "collagen-vascular" diseases (dermatomyositis, etc.), thrombocytopenic purpura, chronic eosinophilia, hemolytic anemia, diuretic-resistant congestive heart failures, and adrenogenital syndrome.

There have not been sufficient patients in any of the above categories to permit definitive treatment schedules to be finally established for ARISTOCORT. Additional studies are now in progress and physicians desiring information on any of these diseases are requested to write to Lederle Laboratories, Pearl River, New York for available data.

ARISTOCORT is available in 2 mg. scored tablets (pink); 4 mg. scored tablets (white). Bottles of 30.

Bibliography

1. Hellman, L., Zumoff, B., Kretshmer, N., and Kramer, B.: Presented at Nephrosis Conf., Bethesda, Md., Oct. 26, 1957. 2. Ibid: Personal Communication. 3. Barach, A. L: Personal Communication. 4. Segal, M. S.: Personal Communication. 5. Cooke, R. A.: Personal Communication. 6. Farber, S.: Personal Communication. 7. Hellman, L., Diamond, H. D., Ellison, R., Jaslowitz, B., Murphy, M. L., Tan, C. and Zumoff, B.: Personal Communication.

Lederle

The Promise of Aristocort

in Inflammatory and Allergic Skin Diseases

◯ *Over 200 patients with allergic and inflammatory skin diseases (including psoriasis, atopic dermatitis, exfoliative dermatitis, pemphigus, dermatitis herpetiformis, eczematoid dermatitis, contact dermatitis and angioneurotic edema) have been treated continuously with* ARISTOCORT *for periods of up to eight months.*

Results of treatment

Rein and associates[1] treated 26 patients with severe dermatitis. Twenty-four had been on prednisone when changed to ARISTOCORT. While some had found satisfactory symptomatic relief, others had also developed side effects—moon face, buffalo hump, increased appetite with excessive weight increases and gastro-intestinal disturbances.

These investigators determined the equivalent dosage of ARISTOCORT to be approximately two-thirds that required to control symptoms on the previous corticosteroid. Thirteen of the 26, who had developed moon face, noted either an actual decrease or no further increase when transferred to ARISTOCORT. In addition: *Voracious appetites disappeared, with loss of weight in 11 patients; there was no elevation in blood pressure, and no necessity to restrict sodium or administer supplemental potassium.* Sherwood and Cooke,[2] and Shelley and Pillsbury[3] obtained similar results in allied disorders.

Hollander[4] first observed that ARISTOCORT appears to have striking affinity for the skin and great activity in controlling such diseases as psoriasis, for which other corticosteroids have been indifferently effective. Shelley and Pillsbury,[3] in 50 cases of acute extending psoriasis found that over 60 per cent were markedly improved.

Dosage and course of therapy

The recommended initial suppressive dose range is 14 to 20 mg. per day. In very severe cases, temporary dosages up to 32 mg. a day have been successfully employed. Once lesions are suppressed, gradually reduce dose to the maintenance level—which may be as low as 2 mg. per day.

Bibliography

1. Rein, C. R., Fleischmajer, R., and Rosenthal, A.: J.A.M.A., *165*:1821, 1957. 2. Sherwood, H., and Cooke, R. A.: Personal Communication. 3. Shelley, W. B., and Pillsbury, D. M.: Personal Communication. 4. Hollander, J. L.: Discussion of Paper by Black, R. L., presented at International Congress on Rheumatic Diseases, Toronto, June 28, 1957.

in Disseminated Lupus Erythematosus

◯ *Forty patients with disseminated lupus erythematosus were treated with* ARISTOCORT *for continuous periods of up to nine months.*

Results of treatment

Patients have responded very promisingly to therapy. Dubois[1] has had the largest single experience (28 cases) with ARISTOCORT in the treatment of this disease. He reported 25 of the 28 responded favorably.

Freyberg,[2] Hartung,[3] Hollander,[4] Spies,[5] and Segal,[6] each in smaller series of cases, reported similarly good therapeutic responses.

Dosage and course of therapy

The initial suppressive dose recommended is 20-30 mg. daily. Once the desired effect is achieved, the dose should be reduced gradually to maintenance levels (3 to 18 mg. per day).

In severely ill patients large doses may be required for several days in order to preserve life. Even on these large doses, edema and sodium retention have not occurred.

ARISTOCORT is available in 2 mg. scored tablets (pink); 4 mg. scored tablets (white). Bottles of 30.

Bibliography

1. Dubois, E. L.: Personal Communication. 2. Freyberg, R. H.: Personal Communication. 3. Hartung, E. F.: Personal Communication. 4. Hollander, J. L.: Personal Communication. 5. Spies, T. D.: Personal Communication. 6. Segal, M. S.: Personal Communication.

Lederle

in

HAY FEVER

Family Physicians use

specific desensitization for *lasting immunity

. . . easily, pleasantly and economically

SPECIFIC DESENSITIZATION . . .

is easily accomplished, quickly and accurately by any physician. Simply scratch test each patient by using activated Barry allergens to determine what offends the patient. Then send a list of these offenders with their reactions to Barry for the preparation of a specific desensitization formula which promotes *lasting active immunity*. For scratch testing your patient, use the Barry Pollen-Pack containing 21 tests of Tree, Grass and Weed pollens including Fungi and House Dust, all botanically correct for your locality. Safe, simple, time-proven technique complete with directions for your nurse.

LASTING ACTIVE IMMUNITY . . .

is obtained by desensitizing patients for the specific irritants to which your patient reacted by the scratch test. Each desensitization formula is individually prepared for each patient according to his own needs based upon the list of irritants that you supply and the degree of reaction of each. Specific desensitization immediately *promotes active immunity* lasting longer than any other known medication. Each specific treatment is prepared in a three vial serial dilution set (20 doses) and includes a personalized treatment schedule indicating the correct interval to use between injections. For patients that have already been skin tested by any means, send their list of offenders to the Allergy Division. Prompt 7-10 day service for all Rx's.

*write for free literature

FREE
Scratch Test Set
with each Rx Specific Desensitization Set prepared according to your patient's own skin test reactions.

BARRY LABORATORIES, INC.
Allergy Division
DETROIT 14, MICHIGAN

BARRY
since 1928



there's pain and inflammation here... it could be mild or severe, acute or chronic, primary or secondary fibrositis—or even early rheumatoid arthritis

more potent and comprehensive treatment than salicylate alone

. . . assured anti-inflammatory effect of low-dosage corticosteroid[1]

. . . additive antirheumatic action of corticosteroid plus salicylate[2-5] brings rapid pain relief; aids restoration of function.

. . . wide range of application including the entire fibrositis syndrome as well as early or mild rheumatoid arthritis

more manageable corticosteroid dosage

. . . much less likelihood of treatment-interrupting side effects[1-6]

. . . simple, flexible dosage schedule



in any case
it calls for

Sigmagen®

corticoid-salicylate compound

tablets

Composition

Meticorten® (prednisone)	0.75 mg.
Acetylsalicylic acid	325 mg.
Aluminum hydroxide	75 mg.
Ascorbic acid	20 mg.

Packaging: Sigmagen Tablets, bottles of 100 and 1000.

References: 1. Spies, T. D., et al.: J.A.M.A. 159:645, 1955. 2. Spies, T. D., et al.: Postgrad. Med. 17:1, 1955. 3. Gelli, G., and Della Santa, L.: Minerva Pediat. 7:1456, 1955. 4. Guerra, F.: Fed. Proc. 12:326, 1953. 5. Busse, E. A.: Clin. Med. 2:1105, 1955. 6. Sticker, R. B.: Panel Discussion, Ohio State M. J. 52:1037, 1956.

Acute conditions: Two or three tablets four times daily. After desired response is obtained, gradually reduce daily dosage and then discontinue.

Subacute or chronic conditions: Initially as above. When satisfactory control is obtained, gradually reduce the daily dosage to minimum effective maintenance level. For best results administer after meals and at bedtime.

Precautions: Because Sigmagen contains prednisone, the same precautions and contraindications observed with this steroid apply also to the use of Sigmagen.

SCHERING CORPORATION • BLOOMFIELD, N. J.

60-J-648

Schering

Cancer Comment

WHAT TO DO WITH THE "PAP" SMEAR REPORT

The cell examination for uterine cancer is undoubtedly the tool which will eventually bring this form of malignancy under control so that it will be a minor factor in cancer morbidity and mortality in women. If this simple method can be applied annually to the routine pelvic examinations of all women over twenty-five years, we can look forward to the day, in the not too distant future, when uterine cancer in its invasive stage will be less common than lobar pneumonia, polio, or other infectious diseases.

The more widespread use of this method, however, clearly indicates that there is lack of proper understanding of how the reports of these examinations should be handled to give maximum protection against uterine cancer. Attempts at followup in recent series of these examinations show that clinicians too frequently disregard or pass off lightly "positive" or "suspicious" reports. So that there will be maximum benefit from these examinations, the following plan of action is strongly recommended.

Furthermore, it cannot be too strongly emphasized that *all suspicious and positive "Pap" smear reports MUST be confirmed by conventional biopsy studies before definite treatment* (surgery, x-ray, or radium) *before cancer of the uterus is carried out.*

Most pathologists today report results of these tests as negative, suspicious, or positive instead of using the more complicated scheme originally developed by Dr. Papanicolaou. On the basis of this simplified reporting scheme, it is recommended that the reports be handled as follows:

Negative Report.—A negative report in the absence of visible changes in the cervix or suspicious patient symptoms indicates repetition of the smears at periodic intervals probably annually. The presence of suggestive signs or symptoms of uterine pathology are, however, an indication for immediate repetition of the smears. If the second report is negative but the signs and symptoms remain, there is still indication for immediate further investigation of the findings. This should include cervical biopsy and/or D and C. While biopsy of an apparent cervical lesion or quadrant biopsy in other cases may be adequate in most instances, the best recommendation is a cold knife cone biopsy. This type of biopsy which secures tissue from high in the cervical canal, coupled with a D and C (both hospital procedures) will give the maximum amount of information in ruling out cancer of the uterus. The pathologist must make multiple slides of the entire cone biopsy as well as the D and C materials, to insure adequacy of the examination. The cervical biopsy of course should be obtained before the D and C. If these studies are negative for cancer, the smears should be repeated in six months. Positive biopsies on the other hand require treatment as indicated by the type of cancer found.

Suspicious Report.—This type of report has caused the greatest amount of uncertainty and confusion in the minds of some clinicians. It is recommended that the test should be repeated immediately, although if a lesion is visible, one may wish to proceed directly to biopsy of the lesion or quadrant biopsy of the cervix. A second suspicious report is a clear and mandatory indication for a cold knife cone biopsy and D and C. If these studies are negative, the smears should be repeated in a suitable period of from three to six months. If however, the biopsy studies are positive for cancer, the patient must be treated as indicated by the type of cancer found.

Positive Report.—A positive smear is a clear mandatory indication for immediate biopsy and D and C. Here it is strongly recommended that a cold knife cone biopsy be carried out *before* the D and C, and the curettings from the cervical canal be kept separate from the endometrial specimens in order to further rule out squamous cell cancers which sometimes arise high in the cervical canal. Negative biopsies should indicate repetition of the smears in three months whereas positive biopsies should indicate immediate treatment according to the type of cancer found.

C. Allen Payne, M.D.

Over a thirty-year period, in a group of 7,941 hospitalized patients over sixty-one years of age, cancer was found in 1,110, or 13.9 per cent.

* * *

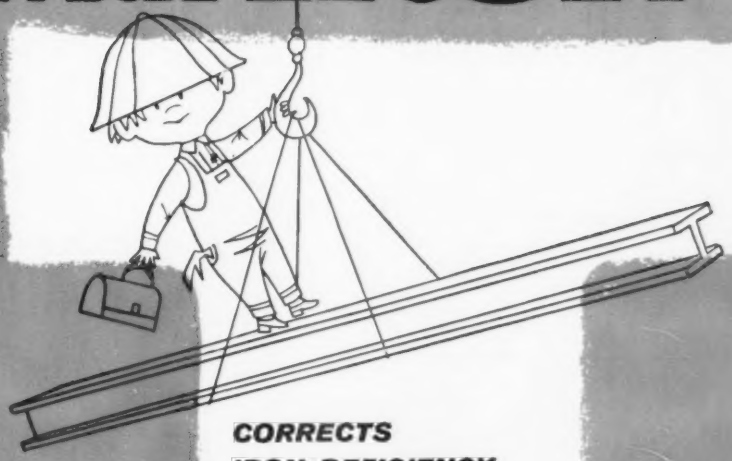
In 1,177 autopsies, unsuspected cancer was found in 292 cases, or 24.8 per cent. Twenty-two, or 2 per cent of these patients, had multiple cancers.

* * *

It should never be forgotten that cancerphobia existed long before the present educational program was developed.

new INCREMIN* with IRON syrup

LYSINE-VITAMINS



CORRECTS IRON DEFICIENCY AS IT STIMULATES APPETITE

DELICIOUS CHERRY FLAVOR
DESIGNED TO APPEAL TO
BOTH CHILDREN AND ADULTS

PARTICULARLY FOR CHILDREN



Supplies essential Iron as ferric pyrophosphate, highly stable, well-tolerated, readily absorbed; essential vitamins B_1, B_6 and B_{12}, established as appetite stimulants; essential l-Lysine for greater protein economy in the pediatric diet.

INCREMIN Syrup

FORMULA: Each teaspoonful (5 cc.) contains:

l-Lysine HCl	300 mg.
Ferric Pyrophosphate (Soluble)	250 mg.
Iron (as Ferric Pyrophosphate)	30 mg.
Vitamin B_{12} Crystalline	25 mcgm.
Thiamine Mononitrate (B_1)	10 mg.
Pyridoxine HCl (B_6)	5 mg.
Alcohol	0.75%

Average dosage is 1 teaspoonful daily.
Available in bottles of 4 fl. oz.

*REG. U. S. PAT. OFF.

LEDERLE LABORATORIES DIVISION, AMERICAN CYANAMID COMPANY, PEARL RIVER, N.Y.

PR REPORT

STORMY SEAS FOR SHIP OF STATE, AND FOR MSMS CREW, TOO

There's an old saw among air force navigators that goes something like "we're still lost, but we're making very good time!" Observers on the capitol scene in Lansing quickly admit that that wary appraisal of the situation accurately fits this year's "short session" of the state Legislature.

These even-numbered-year sessions are geared to a rigid time schedule. Committees meet day and night. Public hearings overlap and invade each other in crowded chambers. Midnight oil burns fiercely. The slightest faltering in the progress of a bill is apt to spell its doom. Still, after two months of such legislative industry, the major problems of Michigan are yet to be solved. The Legislators have worked very, very hard but up to mid-March have accomplished very little.

That order emerges from the seeming chaos is a wonder. Yet, wonder or no, order does prevail, and when this item appears in print the lawmakers will have resolved the problems of state for fiscal 1958-59, paid up their final hotel bills and headed for home to prepare for the fall election campaigns.

Without detracting in any way from the wisdom and abilities of the individual lawmaker, it should be pointed out that there is a "magic" ingredient that makes this remarkable result possible. It is the ready availability of the wise counsel and advice of specialists in each field of governmental interest, be it agriculture, traffic safety, medicine, or whatever.

MSMS members who have selflessly made their energies, counsel and advice on matters of the health care of the public available to their Legislators can take justifiable pride in the success of their efforts.

This column would like to extend a well-deserved vote of appreciation to all contributors to the MSMS legislative effort.

ORIGINS OF SELF-REGULATION IN MEDICINE: PART III

By Gaylord S. Bates, M.D.

We have now reached a period in time when medicine fell back into the priesthood not to emerge until about the 12th century so far as the Western World is concerned. We have seen that in various parts of the civilized world, society had already evolved measures of protection for its members against the unique powers of the physician by the use of fee codes, retaliation for what we might call malpractice, restrictions on the right to practice medicine, and by regulation of the teaching of medicine. Concomitantly, in the highest civilization of all the ancient world, the Greek physicians evolved a professional code of morals and conduct which stood unchallenged till the 19th century, and is still unsurpassed as expressing the idealism of medicine.

By the 12th century the rebirth of learning had given rise to the founding of universities. The church no longer favored the practice of medicine by clerics. The profession again came into lay hands though the church kept a heavy hand upon the institutions of learning. The surgeon was a craftsman and fell easily into the guild system. Guilds were vocational groups established in the growing cities of the 11th and 12th centuries. The state compelled the joining of them and no craftsman could exercise his craft outside the guild. By state decree they became self-regulation bodies, essentially monopolistic, guaranteeing a certain quality of work to society, and certain privileges to themselves. Surgeons at that time were usually barbers and bath house keepers. Physicians, not being craftsmen, became members of a liberal academic profession, ultimately organized, and their regulating body became by statute the medical faculty of the universities. The first regulations were issued in connection with the first medical faculty of the western world at the school of Salerno in 1140 when Norman King Roger issued an order to the effect that one who wished to practice medicine had to present himself before officials and examiners of the Masters of Salerno, and prohibiting the practice by anyone who did not so present himself.

The most remarkable set of regulations concerning medicine is to be found in the Imperial Constitution of Frederick the Second of Hohenstaufen, Emperor of the Romans and King of Sicily and Jerusalem. He was an unusual ruler who effected a complete reorganization of his state. The unique feature of his plan was that the state should be administered by non-clerical officers responsible to him alone. In order to supply the state with informed officials he founded the University of Naples in 1224. Seven years later Frederick published the famous Imperial Constitution, a remarkable collection of laws which set the pattern for future bureaucratic state organization and included two regulations for medicine, which I shall relate in part.

(Continued on Page 500)

This is the third installment of a paper presented before the Detroit Academy of Medicine at the Dearborn Inn, November 12, 1957.



with new

CARTRAX*

PETN + ATARAX®

(PENTAERYTHRITOL TETRANITRATE) (BRAND OF HYDROXYZINE)

why PETN? *For cardiac effect:* PETN is ". . . the most effective drug currently available for prolonged prophylactic treatment of angina pectoris."[1] Prevents about 80% of anginal attacks.

why ATARAX? *For ataractic effect:* One of the most effective—and probably the safest—of tranquilizers, ATARAX frees the angina patient of his constant tension and anxiety. Ideal for the on-the-job patient. And ATARAX has a unique advantage in cardiac therapy: it is anti-arrhythmic and non-hypotensive.

why combine the two? *For greater therapeutic success:* In clinical trials, CARTRAX was demonstrably superior to previous therapy, including PETN alone. Specifically, 87% of angina patients did better. They were shown to suffer fewer attacks . . . require less nitroglycerin . . . have increased tolerance to physical effort . . . and be freed of cardiac fixation.

1. Russek, H. I.: Postgrad. Med. *19*:562 (June) 1956.

Dosage and Supplied: Begin with 1 to 2 yellow CARTRAX "10" tablets (10 mg. PETN plus 10 mg. ATARAX) 3 to 4 times daily. When indicated this may be increased by switching to pink CARTRAX "20" tablets (20 mg. PETN plus 10 mg. ATARAX.) For convenience, write "CARTRAX 10" or "CARTRAX 20." In bottles of 100.

CARTRAX should be taken 30 to 60 minutes *before* meals, on a continuous dosage schedule. Use PETN preparations with caution in glaucoma.

Roerig

NEW YORK 17, NEW YORK
Division, Chas. Pfizer & Co., Inc.

*Trademark

ORIGINS OF SELF-REGULATION IN MEDICINE

(Continued from Page 498)

Liber III, Titulus XLVI

CONCERNING DOCTORS

Because the science of medicine can never be known unless some knowledge of logic is first acquired, we decree that no one shall study medical science unless he has first studied the science of logic for at least years; after this period of three years, if he wishes the student may advance to the study of medicine to which he must devote five years, in such wise that he shall within the prescribed period of study, learn in addition that field of medicine which is surgery. After this and not before, he will be granted a license to practice as a doctor, provided he has first attended an examination of a form prescribed by the Government, and has also received a testimonial from his master certifying that he has completed the prescribed period of study.

A doctor shall swear that he will observe the regulations fixed by the Government up to this time . . .

No doctor shall practice after the completion of the five-year period who has not practiced for an entire year under the direction of an experienced doctor. During the period of five years the masters shall teach in the schools the authenticated books of both Hippocrates and Galen, and shall instruct in the theory as well as in the practice of medicine. Moreover, we decree as a measure for the public health that no surgeon shall be admitted to practice who does not present testimonials from masters in the faculty of medicine, stating that he has studied for at least a year in that field of medicine which develops skill in surgery; in particular, that he has learned in the schools the anatomy of human bodies, and that he is proficient in that field of medicine without which incisions cannot be safely made nor fractures healed.

Liber III, Titulus LXV

THAT NO MAN SHALL DARE TO PRACTICE UNTIL HE HAS BEEN OFFICIALLY CERTIFIED IN THE CONVENTION OF THE MASTERS OF SALERNUM. EMPEROR FREDERICK

We secure advantage to the individual whenever we provide for the health of our faithful subjects. Accordingly, being mindful of the heavy loss and irreparable harm that can result from the experience of doctors, we order that in future no one alleging the title of doctor shall dare to practice in any other manner, or even to heal unless he shall first be certified by the judgment of the masters in the public convention at Salernum, and licensed by testimonials as to his trustworthiness and sufficient science from his masters and from our representatives . . . the penalty of confiscation of goods and a year's imprisonment shall await those who in future venture to practice in defiance of this ordinance of our serene majesty.

A matter of particular interest in regard to these laws is the fact that the practice of medicine was then regarded as is the practice of medicine today, as a privilege and not as a matter of right. To paraphrase Judge Cardozo, it is a privilege burdened with conditions. A fair private and professional character is one of them.

PUBLIC RELATIONS BEGINS IN THE DOCTOR'S OFFICE

Third installment of a paper by
R. Wallace Teed, M.D., Ann Arbor
Chairman, MSMS Public Relations Committee

The Patient Meets the Doctor

When the patient enters the consulting room he should be greeted respectfully but with no appearance of effusiveness on the part of the doctor. The patient likes to hear his own name, and addressing him by this name makes him feel that he is considered as an individual and not just another "case."

In taking the history it is well to let the patient say everything he wishes to say. He considers himself intelligent and has closely observed the symptoms, the detailing of which he feels will aid the physician in his diagnosis. If his attempt is brushed aside he will invariably feel that an important item has been overlooked, or that his intelligence has been discounted. However, if the physician patiently and sympathetically listens to his history, he feels that he is a part of the problem and that his intelligence has been complimented. Almost invariably he will include a great deal of extraneous material which the physician may consider a waste of time, but if the wheat is separated from the chaff it will practically always contribute to a correct diagnosis. Many errors in diagnosis could have been avoided simply by listening to the patient, and in some cases, the history is the most important part of the diagnosis.

Likewise, it does no harm to ask the patient what he thinks is the cause of the trouble, and even if he is wrong, he feels better toward the physician for asking. The day has passed that the physician can assume that the public considers him omniscient. Admitting this may lead some physicians to assume that the patient may consider them ignorant, but this is not so. People in general are not impressed by a know-it-all.

In making the physical examination, the physician should make a complete, careful survey, including consultation and laboratory work as indicated. Nothing contributes more toward poor patient relations than a hurried, slipshod examination. Most patients have been examined before, and know in general what to expect. They want to know that the physician is seriously attempting to locate the cause of their trouble. Likewise, the physician should not attempt to minimize complaints or findings. To the patient, these are important, otherwise he would never have come to the office in the first place.

antiallergic benefits all day or all night with just one Pyribenzamine®



LONTAB®

The Pyribenzamine Lontab is unique in two ways. Its outer shell actually releases 33 mg. Pyribenzamine for immediate relief. Its specially formulated inner core slowly and consistently releases an additional 67 mg. Pyribenzamine to extend relief up to 12 hours.

For short-term or intermittent therapy, you can prescribe regular Pyribenzamine tablets.

SUPPLY: *Pyribenzamine Lontabs,* 100 mg. (light blue). *Pyribenzamine Regular Tablet,* 50 mg. (scored) and 25 mg. (sugar-coated).

PYRIBENZAMINE® hydrochloride (tripelennamine hydrochloride CIBA)
LONTABS® (long-acting tablets CIBA)



CIBA SUMMIT, N. J.

2/2810MR

'DIURIL'

(CHLOROTHIAZIDE)

in

EDEMA



Start therapy with one or two 500 mg. tablets of 'DIURIL' once or twice a day.

BENEFITS:

- The only orally effective nonmercurial agent with diuretic activity equivalent to that of the parenteral mercurials.
- Excellent for initiating diuresis and maintaining the edema-free state for prolonged periods.
- Promotes balanced excretion of sodium and chloride—without acidosis.

Any indication for diuresis is an indication for 'DIURIL':

Congestive heart failure of all degrees of severity; premenstrual syndrome (edema); edema and toxemia of pregnancy; renal edema—nephrosis; nephritis; cirrhosis with ascites; drug-induced edema. May be of value to relieve fluid retention complicating obesity.

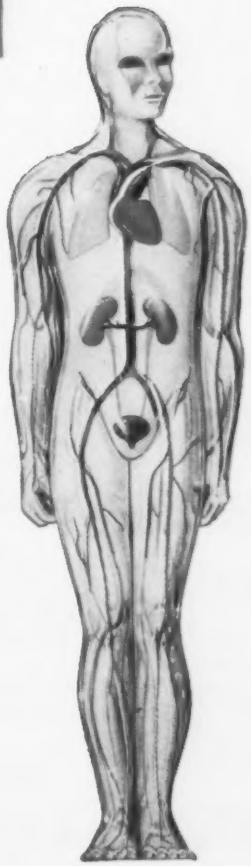
SUPPLIED: 250 mg. and 500 mg. scored tablets 'DIURIL' (chlorothiazide); bottles of 100 and 1,000.

'DIURIL' and 'INVERSINE' are trade-marks of Merck & Co., Inc.

MSD MERCK SHARP & DOHME
Division of MERCK & CO., Inc., Philadelphia 1, Pa.

as simple
as 1-2-3
in

HYPERTENSION



1 INITIATE 'DIURIL' THERAPY
'DIURIL' is given in a dosage range of from 250 mg. twice a day to 500 mg. three times a day.

2 ADJUST DOSAGE OF OTHER AGENTS
The dosage of other antihypertensive medication (reserpine, hydralazine, etc.) is adjusted as indicated by patient response. If the patient is established on a ganglionic blocking agent (e.g., 'INVERSINE') this should be continued, but the total daily dose should be *immediately* reduced by 25 to 50 per cent. This will reduce the serious side effects often observed with ganglionic blockade.

3 ADJUST DOSAGE OF ALL MEDICATION
The patient must be frequently observed and careful adjustment of all agents should be made to determine optimal maintenance dosage.

BENEFITS:

- improves and simplifies the management of hypertension
- markedly enhances the effects of antihypertensive agents
- reduces dosage requirements for other antihypertensive agents—often below the level of distressing side effects
- smooths out blood pressure fluctuations

INDICATIONS: management of hypertension

Smooth, more trouble-free management of hypertension with 'DIURIL'

New Inservice Training Program Offered Medical Assistants

Courses for medical assistants opened in Jackson, Lansing and Pontiac in mid-February in a new inservice training program now being developed by the University of Michigan Extension Service at the request of the Michigan State Medical Assistants Society.

Purpose of the program is to give the medical assistant training that is needed to make her a more efficient worker. Most of the 8,000 medical assistants employed by practicing physicians in Michigan, records show, are in offices where there is only one worker. In such cases, the assistant may be the receptionist, the office manager, the bookkeeper, the cashier, the accountant, the medical technician, and the nurse. The only training which most of these medical assistants have had is that which the employing physician has been able to give.

The inservice program consists of six courses offering orientation in three major areas: medicine, business administration, and the humanities. The program has been outlined with the advice and co-operation of the education committee of the Michigan State Medical Assistants Society and of an advisory committee appointed by the Michigan State Medical Society. The Extension Service has obtained the co-operation of the University's School of Business Administration, School of Medicine, and the department of psychology of the College of Literature, Science, and the Arts in the preparation of the courses.

During the next two years, the six courses in the program will be scheduled on a rotating basis in cities located within a radius of 70 miles of Ann Arbor. The courses now under way are "Medical Information for Medical Assistants," offered in Pontiac by Harry A. Towsley, M.D., associate director of the department of postgraduate medicine, and staff; "Understanding Human Behavior," offered in Lansing by Dr. Stanley J. Segal, assistant chief, counseling division, bureau of psychological services; and "Secretarial Office Management," given in Jackson by Dr. Irene Place, associate professor of office management. The other three courses in the series will be "Medical Office Techniques for Medical Assistants," "Business Theory for Secretaries," and "Backgrounds in Medicine." All instructors in the program are members of the University of Michigan faculty.



why wine in Urology?



THE essence of recent research on the effects of wine in renal disease indicates (1) that wine in moderate quantities is non-irritative to the kidneys; (2) that wine increases glomerular blood flow and diuresis; (3) that it is useful in minimizing acidosis, and (4) that properly used in selected patients, wine can brighten an otherwise monotonous and unappealing diet.

The Superior Diuretic Action of White Wine—The diuretic properties of wine have been the subject of intensive study. Interestingly, the diuretic action of white wine, and particularly sweet white wine, has been found to be superior to that of red wine.

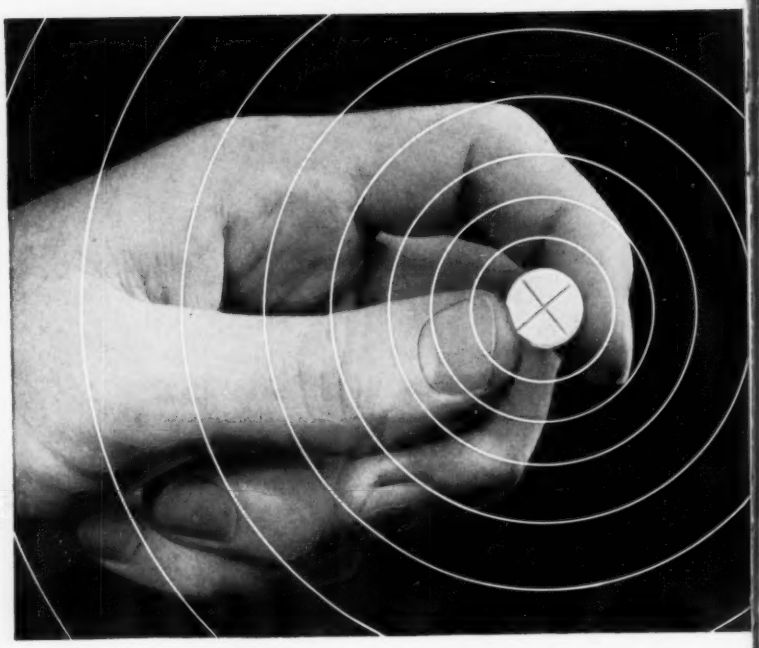
White wine, therefore, is prescribed with benefit in nephritis, especially that associated with hypertension and arteriosclerosis. Wine is not suggested in cases of renal insufficiency.

The Buffers in Wine—Such buffering agents as natural tartrates and phosphates in wine prevent the acidosis which normally tends to follow the ingestion of alcohol. Used in renal disease, therefore, wine tends to minimize acidosis and maintain the alkaline reserve.



An extensive bibliography is now available showing the important role of wine in various phases of medical practice. A digest of current findings with specific references to published medical literature is yours for the asking. Just write for your copy of *"Uses of Wine in Medical Practice"* to Wine Advisory Board, 717 Market Street, San Francisco 3, California.

ONLY ONE TABLET A DAY



now... unprecedented Sulfa therapy

KYNEX*

SULFAMETHOXYPYRIDAZINE LEDERLE

New authoritative studies show that KYNEX dosage can be reduced even further than that recommended earlier.[1] Now, clinical evidence has established that a single (0.5 Gm.) tablet maintains therapeutic blood levels extending beyond 24 hours. Still more proof that KYNEX stands alone in sulfa performance—

- Lowest Oral Dose In Sulfa History—0.5 Gm. (1 tablet) daily in the usual patient for maintenance of therapeutic blood levels
- Higher Solubility—effective blood concentrations within an hour or two
- Effective Antibacterial Range—exceptional effectiveness in urinary tract infections
- Convenience—the low dose of 0.5 Gm. (1 tablet) per day offers optimum convenience and acceptance to patients

NEW DOSAGE

The recommended adult dose is 1 Gm. (2 tablets or 4 teaspoonfuls of syrup) the first day, followed by 0.5 Gm. (1 tablet or 2 teaspoonfuls of syrup) every day thereafter, or 1 Gm. every other day for mild to moderate infections. In severe infections where prompt, high blood levels are indicated, the initial dose should be 2 Gm. followed by 0.5 Gm. every 24 hours. Dosage in children, according to weight; i.e., a 40 lb. child should receive ¼ of the adult dosage. It is recommended that these dosages not be exceeded.

Tablets:
Each tablet contains 0.5 Gm. (7½ grains) of sulfamethoxypyridazine. Bottles of 24 and 100 tablets.

Syrup:
Each teaspoonful (5 cc.) of caramel-flavored syrup contains 250 mg. of sulfamethoxypyridazine. Bottle of 4 fl. oz.

[1] Nichols, R. L. and Finland, M.: J. Clin. Med. 49:410, 1957.

LEDERLE LABORATORIES DIVISION, AMERICAN CYANAMID COMPANY, PEARL RIVER, NEW YORK

*Reg. U. S. Pat. Off.

Lederle

Rural Health Conference a Real Triumph

The peacetime uses of atomic energy as applied to community and individual health problems caught the attention of more than 300 persons who attended the 11th Annual Michigan Rural Health Conference, held at the University of Michigan, Ann Arbor, January 22-23, 1958.

Those attending this outstanding meeting were high in their praise of the caliber of the program developed by Dan E. Reed, General Chairman, and Harry A. Towsley, M.D., Vice-Chairman. Many labeled this the greatest program for a meeting of this type.

Fifty-six speakers and experts in health covered such atomic topics as radiation and food, the effects of radiation on the body, and the atom as a diagnostic and therapeutic tool. In addition, there were discussions on health careers, placing doctors in rural areas, health and recreation planning in suburban and rural areas, preventive medicine, farm and home accidents, poison control centers, utilization of health personnel in time of disaster, and medical-surgical insurance coverage.

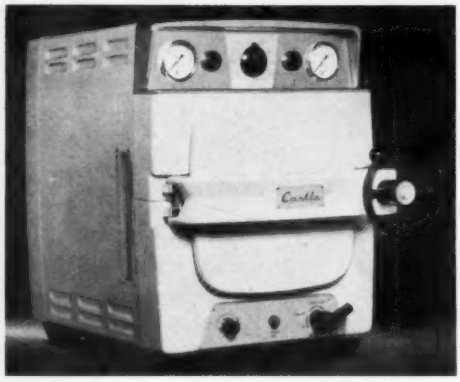
Eight awards were presented by the Michigan Health Council to persons or organizations for outstanding health activities.

Miss Marjorie Delavan, who retired as chief of the health education section of the State Health Department in 1957, received the Public Health Award. The Marshall School Health Council, of Marshall, Michigan, received an award for exceptional health work by a local organization. The Roseville Health Council and the Dearborn Health Council were given honorable mention awards.

Journalism awards went to the *Lansing State Journal* and the *Detroit Times*. They were recognized for their public service in printing the Survey of Consumer Opinion on Medical Care Protection questionnaire. The survey was conducted last summer by the Michigan State Medical Society in co-operation with the Michigan Health Council in an effort to find out what benefits Michigan residents wanted covered by their medical insurance policies.

Hugh W. Brenneman, of Lansing, and L. Gordon Goodrich, of Detroit, the Secretary and Treasurer of the Michigan Health Council, respectively, were lauded for ten years of service to the organization.

The Rural Health Conference is sponsored by the Michigan Foundation for Medical and Health Education — and co-sponsored by the Michigan Health Council—along with more than 100 state-level health associations.



New unit has big 9x16-inch chamber, bulk supply rack, two oversize trays; one 8½ x 15". In addition, unit has built-in water level gauge, reversible door swing, smooth, easy-to-clean surface.

We have it . . .

Castle's New 999 Autoclave

and just look at its features!

STYLE—a beauty! All mechanical parts enclosed in a streamline casing of Coral, Jade Green, or Silvertone.

SIMPLICITY—a cinch to run! Single-dial control makes sterilizing as simple as push-button radio tuning.

SPEED—ultra-fast! Double shell gives standby steam reserve for instant readiness.

SAFETY—foolproof! Safety door, safety fill, safety baffle, safety timer, safety air evacuation, safety insulation.

CALL US FOR A DEMONSTRATION

Medical Arts Supply Company
233 Washington S.E. Phone GL 9-8274
Grand Rapids 2, Mich.

&

Medical Arts Pharmacy
20-24 Sheldon S.E. Phone GL 9-8274
Grand Rapids 2, Mich.

in common mixed infections
...tetracycline phosphate alone

PANMYCIN* Phosphate

for children:

PANMYCIN KM TRADEMARK Syrup

BROAD-SPECTRUM TETRACYCLINE IN ITS MOST EFFICIENT FORM

Produces more tetracycline in the blood with no more in the dose. No calcium to depress blood levels.[1] Basic broad-spectrum therapy in bronchitis, pharyngitis, otitis media, tonsillitis, and other common respiratory infections.

1. Welch, H.; Wright, W. W.; and Staffa, A. W.: Antibiotic Med. & Clin. Therapy 4:620, 1957.

in potentially serious infections
...tetracycline phosphate plus novobiocin

PANALBA*

for children:

PANALBA KM TRADEMARK Granules

THE BREADTH OF PANMYCIN PHOSPHATE PLUS THE ANTIMICROCOCCAL DEPTH OF ALBAMYCIN[1]

Offers maximum antimicrobial action at the earliest possible moment. The antibiotic preparation of first resort in pneumonia of unknown etiology, carbuncles, multiple furunculosis, cellulitis, and infections resistant to previous therapy.

for the 7 monilia-susceptible types
...tetracycline phosphate plus nystatin

COMYCIN*

PANMYCIN PHOSPHATE PLUS THE ANTIMONILIAL PROTECTION OF NYSTATIN

The logical choice for patients requiring high doses of antibiotics or prolonged antibiotic therapy; for patients with previous monilial complications; for diabetics, patients on cytotoxoids, the pregnant debilitated, or elderly; and for infants, especially [illegible]

Upjohn

The Upjohn Company Kalamazoo, Michigan



THE CHOICE OF A SYSTEMIC ANTIBIOTIC IS A MATTER OF CLINICAL JUDGMENT

1. PANMYCIN PHOSPHATE IN COMMON MIXED INFECTIONS

USUAL DOSAGE: ADULTS: 250 mg. every 6 hours or 500 mg. every 12 hours. CHILDREN: Approximately 8 mg. per pound of body weight daily, in four equally divided doses every 6 hours, or two equally divided doses every 12 hours.

SUPPLIED: CAPSULES: 250 mg. in bottles of 16 and 100; 125 mg. in bottles of 25 and 100.

PANMYCIN KM SYRUP: Each teaspoonful (5 cc.) contains tetracycline equivalent to 125 mg. tetracycline hydrochloride, and potassium metaphosphate, 100 mg., mint flavor, in 2 fluidounce and pint bottles.

2. PANALBA IN POTENTIALLY SERIOUS INFECTIONS

USUAL DOSAGE: ADULTS: 1 or 2 capsules three or four times a day, depending on the type and severity of the infection. CHILDREN: Proportionately less.

SUPPLIED: Each powder-blue-and-brown capsule contains Panmycin (tetracycline) Phosphate complex equivalent to 250 mg. tetracycline hydrochloride, and Albamycin (as novobiocin sodium) 125 mg.; in bottles of 16 and 100.

Also available: **PANALBA KM GRANULES** (Pediatric). When reconstituted, each 5 cc. teaspoonful contains Panmycin equivalent to tetracycline hydrochloride, 125 mg. and Albamycin (as novobiocin calcium) 62.5 mg., and potassium metaphosphate 100 mg.; in pleasantly flavored vehicle. Dosage is based upon amount of tetracycline—6 to 8 mg. per pound of body weight per day in 2 to 4 equally divided doses.

3. COMYCIN FOR THE 7 MONILIA-SUSCEPTIBLE TYPES

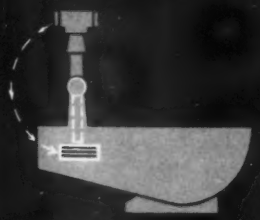
USUAL DOSAGE: ADULTS: 1 or 2 capsules every 6 hours. CHILDREN: Proportionately less.

SUPPLIED: Each brown-and-pink capsule contains tetracycline phosphate complex, equivalent to 250 mg. tetracycline hydrochloride; nystatin 250,000 units. In bottles of 16 and 100.

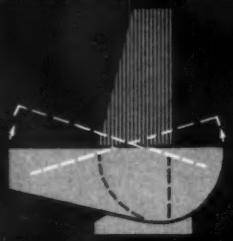
Upjohn

The Upjohn Company, Kalamazoo, Michigan

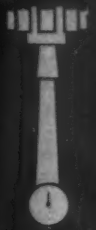
probably the easiest-to-use x-ray table in its field



Instant swing-through from fluoroscopy to radiography (and vice versa). Self guiding to correct operating distance. Nothing to match up . . . you do it without leaving the table front.



Horizontal, vertical, intermediate, or Trendelenburg positions by equipoise handrock (or quiet motor drive).



Choice of rotating or stationary anode x-ray tubes. Full powered 100 ma at 100 KVP.

certainly the simplest automatic x-ray control ever devised



know why? *look . . .*

1 On this board you select the bodypart you want to x-ray

2 Set its measured thickness

3 Press the exposure button

That's all there is to it. No time, KV, or MA adjusting to do. No charts to check, no calculations to make.



housed in this handsome upright cabinet

obviously as canny an x-ray investment as you can make

Modest cost
Excellent value
Prestige "look"
Top Reputation (significantly, "Century" trade-in value has long been highest in its field)

And you can rent if you prefer.

Call in your Picker representative (he's probably in your local 'phone book) or write: PICKER X-RAY CORPORATION 25 South Broadway, White Plains, N. Y.

anatomatic Century diagnostic x-ray unit

Picker x-ray



DETROIT 21, MICH., 8514 W. McNichols Road
Battle Creek, Mich., 231 Eldred Street
Grand Rapids 8, Mich., 48 Honeoye S.W.
Pontiac, Mich., 1415 Oakwood Drive
Flint, Mich., 4734 Canterbury Lane

AMA News Notes

NEW NAME FOR AMA'S DIRECT LINE TO MDs

One of AMA's best-known services to physicians recently changed its name. Beginning with the January 4, 1958 issue of *The Journal of the AMA* the "Queries and Minor Notes" section was carried under the title, "Questions and Answers." A check into the history of this service indicates that the first question from a physician was answered in the March 18, 1899 issue of JAMA under the heading, "Questions and Answers."

Each year, questions relating to practical medical problems come into the JAMA editorial offices at the rate of approximately 2,400 a year. Each query receives a personal reply. The answers are prepared by consultants recognized as competent authorities in their respective medical fields. At the present time, about 900 authorities in all parts of the United States and Canada are maintained as consultants. If the question and its answer seem to be of interest to the majority of doctors, the material is slated for publication in JAMA. Approximately 900 of these questions-answers are published each year. For many years the majority of questions were on dermatologic problems but during 1957 there was a definite shift to questions on various phases of diet and nutrition.

Material appearing in the "Question and Answer" section provided doctors with the most recent information on some subject that was an actual problem for a doctor. Naturally, the physician-reader still must formulate his own opinions about the stated problem, keeping in mind his knowledge of a particular patient.

NEW PLACEMENT AID

A new throw-away leaflet—"Look Before You Leap"—is being produced by the AMA's Physicians Placement Service as a check list for physicians seeking a location. Since many physicians still apparently are not aware of the placement services available to them through their state medical associations and the American Medical Association, this leaflet will be distributed in adequate supplies to state societies, hospitals and medical schools.

ANNUAL MEETING IN JUNE

Between 12,000 and 15,000 physicians will journey westward in June in search of something far more valuable than gold. They'll be on a quest for the latest information on new medical techniques and discoveries at the American Medical Association's 107th Annual Meeting in San Francisco. The five days of June 23-27 will be filled with bright nuggets—including scientific exhibits, lectures, motion pictures, panel discussions, televised surgical procedures and commercial exhibits. Convenient center for the Scientific and Technical Exhibits, films, color TV and lectures will be the Civic Auditorium, the adjacent new Plaza Exhibit Hall and other surrounding buildings. Headquarters for the House of Delegates sessions will be the Sheraton-Palace Hotel.

Plans for an outstanding scientific lecture program are being completed by the Council on Scientific Assembly. Opening the general scientific program Monday afternoon, June 23, will be a symposium on the care of the severely injured patient. Tuesday morning's general meeting will feature another symposium on hazards associated with therapeutic agents. Formal scientific section meetings will run from Tuesday afternoon through Friday morning.

Special panel discussions and demonstrations are being planned throughout the meeting, including: perinatal problems; methods of resuscitation of infants; nutrition; physical examination of physicians, using electrocardiograms and chest x-rays; fresh tissue pathology, and treatment of fractures. The Section on Miscellaneous Topics also is planning sessions on allergy, prevention of traffic accidents, prevention of injury in sports, and medical professional liability. Other features will be a color television program of live operations and demonstrations from San Francisco Hospital and a varied motion picture program.

Two high school winners of AMA scientific awards at the National Science Fair again will display their prize exhibits. In addition, the top winners of the intern-resident and medical student exhibit classifications at the Student AMA convention this spring will be invited for the first time to exhibit at an AMA meeting.

Registration officially opens at the new Plaza Exhibit Hall Monday, June 23, at 8:30 a.m. and closes Friday noon. Advance registrations will be accepted Sunday, June 22, from 12 noon to 4:00 p.m. The Scientific and Technical Exhibits will be open to AMA physician-members *only* on Tuesday and Wednesday mornings.

Plan now to attend this worthwhile medical meeting. Watch for further details in *The Journal of the AMA*.

HATS OFF TO AUXILIARY CHAMPIONS

Winners of the 1957 Woman's Auxiliary *Today's Health* Christmas gift subscription contest recently were announced as follows: Group I—Greenwood-Woodson counties, Kan., Mrs. Harry A. West, president, Mrs. Robert L. Obourn, T. H. chairman; group II—Indiana county, Penna., Mrs. Frederick Dills, president, Mrs. Leonard Volkin, T. H. chairman; group III—Ohio county, W. Va., Mrs. Earl S. Phillips, president, Mrs. Robert W. Leibold, T. H. chairman; group IV—Cook county, Illinois, Mrs. Richard E. Westland, president, Mrs. Mitchell A. Spellberg, T. H. chairman. Ten dollar checks have been sent to the presidents of these four winning local auxiliaries. Special recognition for their outstanding efforts will be given at the *Today's Health* workshop during the Woman's Auxiliary annual convention in June in San Francisco.


BIFRAN®
with a
plus factor
in treating
the overweight
In addition to dulling the appetite, elevating the mood, and easing anxiety, Bifran tablets contain the plus factor, Cholan DH® (dehydrocholic acid, Maltbie). This hydrocholeretic maintains a normal flow of bile, thus avoiding the physiological consequences of low fat intake in the usual dietary program.
Prescribe Bifran tablets for your overweight patients.
Each Bifran tablet contains 5 mg. methamphetamine hydrochloride, 200 mg. dehydrocholic acid (Maltbie), and 15 mg. pentobarbital.
Supplied: Bottles of 100, 500, 1,000.
Maltbie
MALTBIE LABORATORIES DIVISION • WALLACE & TIERNAN INC. • Belleville 9, N. J.

Give me two good reasons



why Buttermilk is a dietary food!

LOW CALORIES, HIGH ESSENTIAL NUTRITION

One glass, or ½ pint, of plain Buttermilk (uncreamed) contains only 87 calories; a whole quart, only 350. Yet uncreamed buttermilk contains all of whole milk's complete proteins, B vitamins, and minerals. One good dietary reason!

BENEFICIAL BACTERIAL-ENZYME ACTION

For many years Buttermilk has been prescribed as an aid in promoting healthful bacterial balance in the digestive tract, especially the lower tract. Second good dietary reason!



and Borden's is extra good Buttermilk!

Making buttermilk sounds simple, but certainly isn't simple at all! Borden's Buttermilk has a deserved reputation for fresh, sweet wholesome flavor.

Borden's
MICHIGAN MILK DIVISION

in each of these indications for a tranquilizer...



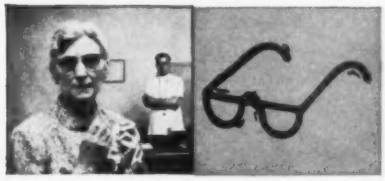
SR is a cardiac patient. His doctor put him on ATARAX because (+) it is an anti-arrhythmic and non-hypotensive tranquilizer.



Other tranquilizers added to PN's g. i. discomfort (he has ulcers). But now his doctor has him on ATARAX because (+) it lowers gastric secretion while it tranquilizes.



Asthmatic JL used to have frequent tantrums followed by acute bronchospasm. Her family doctor tranquilized her with ATARAX because (+) it is safe, even for children.



Senile anxiety and persecution complex dogged Mrs. K. until her doctor prescribed ATARAX Syrup. (+) It tastes good, and it's a perfect vehicle for Mrs. K's tonic.

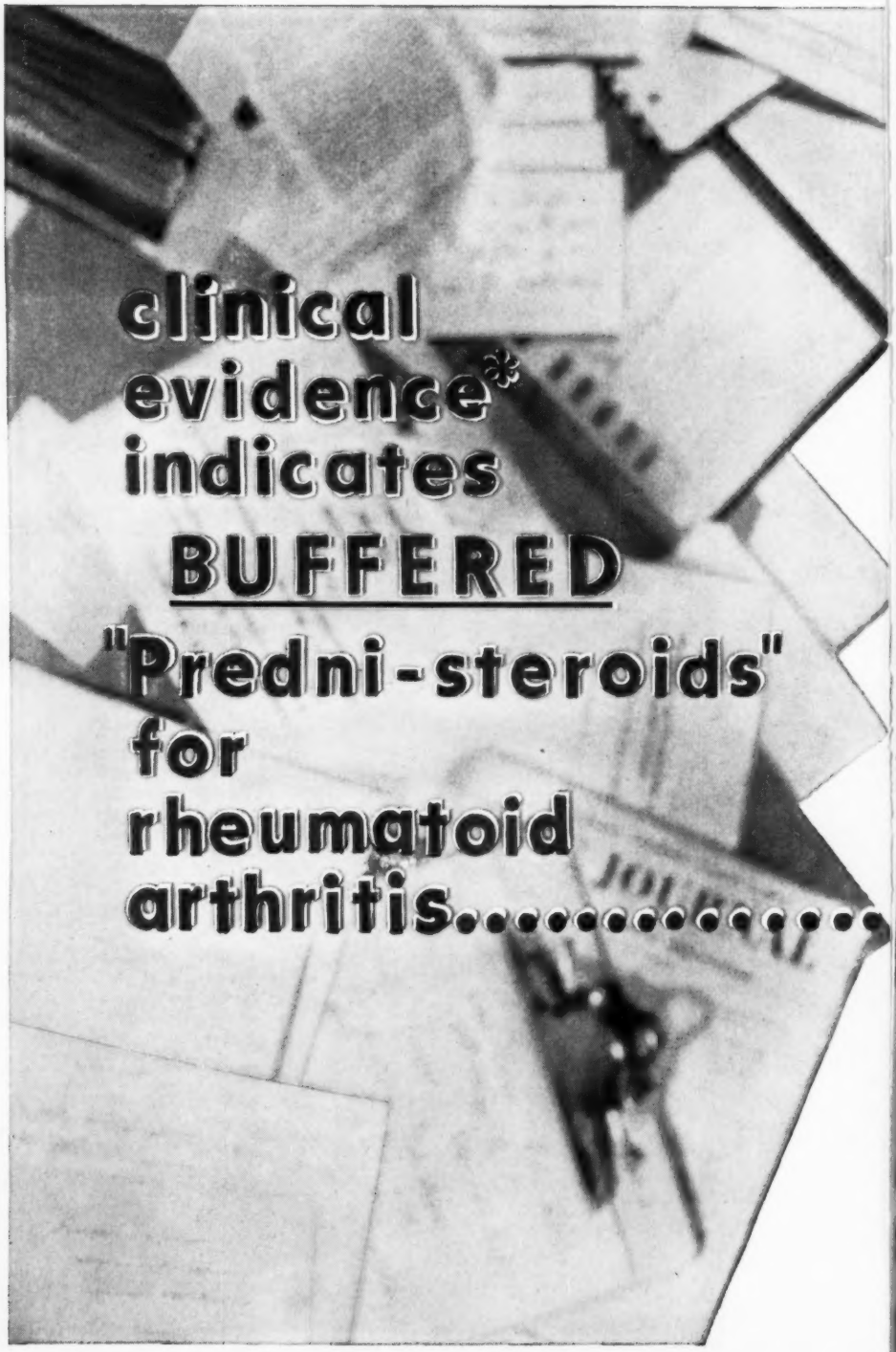
Dosage: Children, 1-2 *10 mg.* tablets or 1-2 tsp. Syrup t.i.d. Adults, one *25 mg.* tablet or 1 tbsp. Syrup q.i.d.

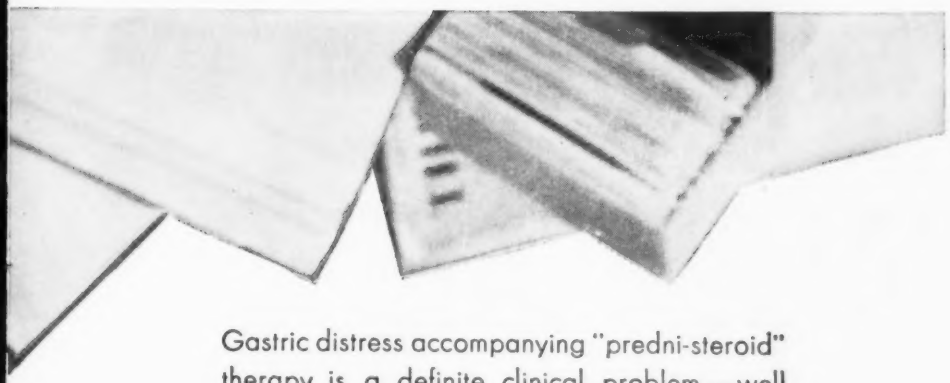
Supplied: 10, 25 and 100 mg. tablets, bottles of 100. Syrup, pint bottles. Parenteral Solution, 10 cc. multiple-dose vials.

...ATARAX® (BRAND OF HYDROXYZINE) gives you an extra benefit

ROERIG Rx

New York 17, New York
Division, Chas. Pfizer & Co., Inc.


clinical
evidence*
indicates
BUFFERED
"Predni-steroids"
for
rheumatoid
arthritis.....



Gastric distress accompanying "predni-steroid" therapy is a definite clinical problem—well documented in a growing body of literature.

*"In view of the beneficial responses observed when antacids and bland diets were used concomitantly with prednisone and prednisolone, we feel that these measures should be employed prophylactically to offset any gastrointestinal side effects."—Dordick, J. R. *et al.*: N. Y. State J. Med. 57:2049 (June 15) 1957.

*"It is our growing conviction that all patients receiving oral steroids should take each dose after food or with adequate buffering with aluminum or magnesium hydroxide preparations."—Sigler, J. W. and Ensign, D. C.: J. Kentucky State M. A. 54:771 (Sept.) 1956.

*"The apparent high incidence of this serious [gastric] side effect in patients receiving prednisone or prednisolone suggests the advisability of routine co-administration of an aluminum hydroxide gel."—Bollet, A. J. and Bunim, J. J.: J. A. M. A. 158:459 (June 11) 1955.

One way to make sure that patients receive full benefits of "predni-steroid" therapy plus positive protection against gastric distress is by prescribing CO-DELTRA or CO-HYDELTRA.

Co-Deltra®
PREDNISONE BUFFERED
multiple compressed tablets

provide all the benefits of "Predni-steroid" therapy— plus positive antacid protection against gastric distress

Co-Hydeltra®
PREDNISOLONE BUFFERED



2.5 mg. or 5.0 mg. of prednisone or prednisolone, plus 300 mg. of dried aluminum hydroxide gel and 50 mg. magnesium trisilicate, in bottles of 30, 100, 500.

MERCK SHARP & DOHME Division of MERCK & CO., Inc., Philadelphia 1, Pa. MSD

NOW...A NEW TREATMENT

'CARDILATE'*

for THE PROPHYLAXIS OF ANGINA PECTORIS

'Cardilate' tablets  shaped for easy retention in the buccal pouch

"... the degree of increase in exercise tolerance which sublingual erythrol tetranitrate permits, approximates that of nitroglycerin, amyl nitrite and octyl nitrite more closely than does any other of the approximately 100 preparations tested to date in this laboratory."

"Furthermore, the duration of this beneficial action is prolonged sufficiently to make this method of treatment of practical clinical value."

Riseman, J. E. F., Altman, G. E., and Koretsky, S.: Nitroglycerin and Other Nitrites in the Treatment of Angina Pectoris, Circulation (Jan.) 1958.

*'Cardilate' brand Erythrol Tetranitrate SUBLINGUAL TABLETS, 15 mg. scored



BURROUGHS WELLCOME & CO. (U.S.A.) INC., Tuckahoe, New York

WHEN YOU TREAT INFECTIONS IN PATIENTS SUCH AS THESE

- debilitated
- elderly
- diabetics
- infants, especially prematures
- those on corticoids
- those who developed moniliasis on previous broad-spectrum therapy
- those on prolonged and/or high antibiotic dosage
- women—especially if pregnant or diabetic

the best broad-spectrum antibiotic to use is

MYSTECLIN-V

Squibb Tetracycline Phosphate Complex (Sumycin) and Nystatin (Mycostatin) — Sumycin plus Mycostatin

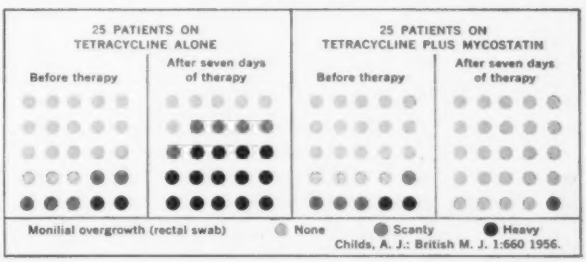
for practical purposes, Mysteclin-V is sodium-free

for "built-in" safety, Mysteclin-V combines:

1. Tetracycline phosphate complex (Sumycin) for superior initial tetracycline blood levels, assuring fast transport of adequate tetracycline to the infection site.

2. Mycostatin—the first safe antifungal antibiotic—for its specific antimonilial activity. Mycostatin protects many patients (see above) who are particularly prone to monilial complications when on broad-spectrum therapy.

MYSTECLIN-V PREVENTS MONILIAL OVERGROWTH



Childs, A. J.: British M. J. 1:660 1956.

Capsules (250 mg./250,000 u.), bottles of 16 and 100. *Half-Strength Capsules* (125 mg./125,600 u.), bottles of 16 and 100. *Suspension* (125 mg./125,000 u.), 2 oz. bottles. *Pediatric Drops* (100 mg./100,000 u.), 10 cc. dropper bottles.

SQUIBB

Squibb Quality—the Priceless Ingredient

"MYSTECLIN-V," "MYCOSTATIN," R AND "SUMYCIN" ARE SQUIBB TRADEMARKS

MICHIGAN MOTHERS

will appreciate

Economical Medication

with

MARION'S "BETTER ASSIMILATED CALCIUM"*

and Natural Trace Minerals from OYSTER SHELL

In Four Combinations with Vitamins and Iron

- No Leg Cramps
  - More Ionized Blood Calcium
    - Fewer Secondary Anemia Problems
  - Better Tolerated Iron Therapy
- Economical Medication

Individualize Your Patient!

OS-CAL

Oyster Shell Calcium
Natural Trace Minerals
Vitamin D
DOSAGE: 1 tab. t.i.d.

OS-VIM

Oyster Shell Calcium
B-Complex
Vitamins A-D-C-E
Natural Trace Minerals
Ferrous Sulfate
DOSAGE: 1 tab. t.i.d.

OS-*feo*-CAL

Therapeutic Iron
Oyster Shell Calcium
Vitamin D
Natural Trace Minerals
DOSAGE: 1 tab. t.i.d.

OS-*feo*-VIM

Therapeutic Iron
Oyster Shell Calcium
Vitamins A-D-C-B6 and K
Natural Trace Minerals
DOSAGE: 1 tab. daily.

note low dosages!

MARION LABORATORIES, Inc.

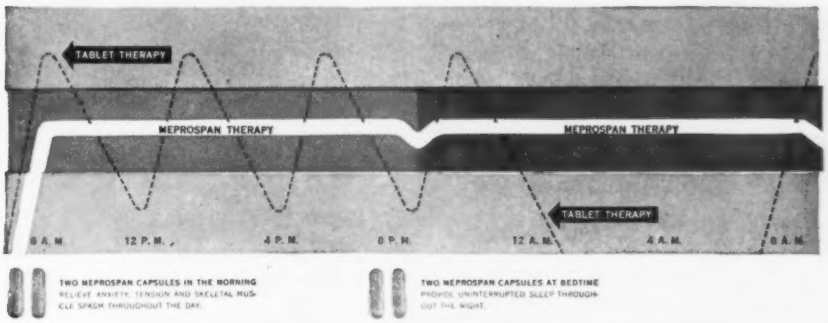
2910 Grand Ave. • Kansas City, Missouri

*HARDY, J. A.: *Obstet. & Gynec.* (Nov., 1956)

Say you saw it in the Journal of the Michigan State Medical Society

New... meprobamate prolonged release capsules

Evenly sustain relaxation of mind and muscle 'round the clock



TWO MEPROSPAN CAPSULES IN THE MORNING RELIEVE ANXIETY, TENSION AND SKELETAL MUSCLE SPASM THROUGHOUT THE DAY.

TWO MEPROSPAN CAPSULES AT BEDTIME PROVIDE UNINTERRUPTED SLEEP THROUGHOUT THE NIGHT.

Meprospan*

MEPROBAMATE IN PROLONGED RELEASE CAPSULES

- maintains constant level of relaxation
- minimizes the possibility of side effects
- simplifies patient's dosage schedule

Dosage: Two Meprospan capsules q. 12 h.
Supplied: Bottles of 30 capsules.
Each capsule contains:
Meprobamate (Wallace) .....200 mg.
2-methyl-2-n-propyl-1,3-propanediol dicarbamate

Literature and samples on request.

WALLACE LABORATORIES, *New Brunswick, N. J.*

*TRADE-MARK CME-6598-48



SANBORN VISETTE

electrocardiograph





18 lbs.
$625 del.
continental U.S.A.

Everything you need for taking an accurate, permanent, directly-recorded electrocardiogram is now available in a "package" the size of a portable typewriter, and that weighs only 18 pounds! *This* is the new Model 300 VISETTE — a completely modern, transistorized ECG recently introduced by Sanborn Company. The unique design has made possible for the first time a clinically *accurate* instrument that is *truly* compact and fully portable.

By actual use — in your own examining room, in your patient's home, at a hospital — you can discover the Visette's value and portability. Convenience of *use*, greater ease of *operation* — and even simpler, faster *servicing*, should the need arise — comprise the design concept of this new Sanborn instrument.

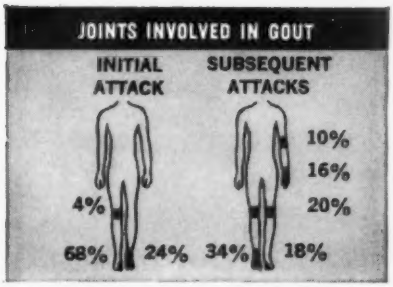
A comprehensive folder describing the Model 300 VISETTE electrocardiograph is available on request. Or call the Sanborn Company Branch Office or Service Agency in your locality for a demonstration in your office — to see for yourself the advantages of owning the ECG that "brings 'cardiography to your patient."

The established Sanborn Model 51 Viso-Cardiette is also available for those who prefer a larger, heavier (34 lbs.) instrument — $785.00, delivered. Many doctors use their "51 Viso" in the office and the Visette on "cardiograph calls."

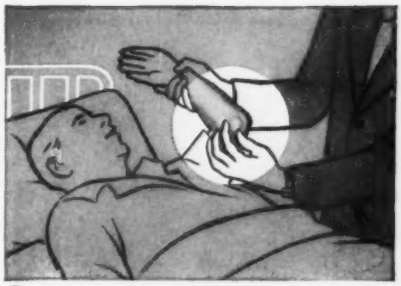


DETROIT *Branch Office*
13136 Puritan Ave.
University 4-6336, 4-6337

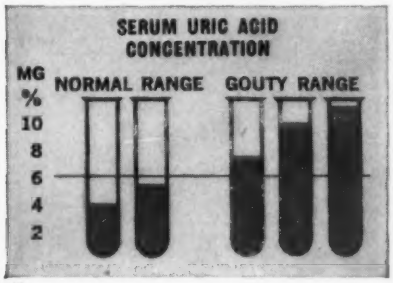
SANBORN COMPANY
MEDICAL DIVISION
175 Wyman Street, Waltham 54, Mass.



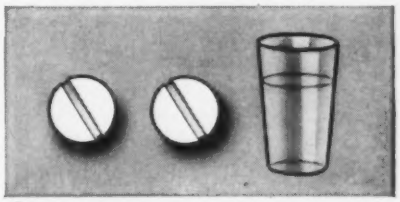
1. Recurrent joint pain followed by long periods of complete remission. *(Percentages refer to incidence.)*



2. Enlargement of bursae such as in this case involving the olecranon bursa.



3. Elevated serum uric acid levels.



4. Colchicine test: full dose (0.5 mg.) every 1 to 2 hours until pain is relieved or nausea, vomiting or diarrhea occur. The test requires usually 8 to 16 doses. Pain relief is highly indicative of gout.

FROM THESE FINDINGS...SUSPECT GOUT:

℞ BENEMID®

PROBENECID

A SPECIFIC FOR GOUT

Once findings point to gout, long-term management can be started with BENEMID. This effective uricosuric agent has these unique benefits:

- Urinary excretion of uric acid is approximately doubled.
- Serum uric acid levels are reduced.
- Uric acid deposits (tophi) in tissues are mobilized.
- Formation of new tophi can often be prevented.
- Fewer attacks and severity is reduced.

RECOMMENDED DOSAGE: 0.25 Gm. (½ tablet) twice daily for one week followed by 1 Gm. (2 tablets) daily in divided doses.

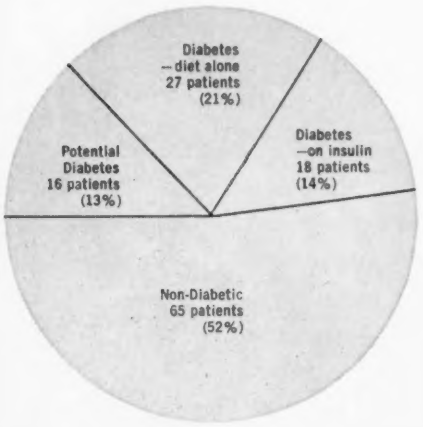
BENEMID is a trade-mark of Merck & Co., Inc.

MSD

MERCK SHARP & DOHME
DIVISION OF MERCK & CO., INC., PHILADELPHIA 1, PA.

AN
AMES
CLINIQUICK

CLINICAL BRIEFS FOR MODERN PRACTICE



should a non-diabetic, transient glycosuria ever be considered unimportant?

Never. A patient showing even a mild transient glycosuria should be observed for years as a diabetic suspect.*

Ultimate diagnosis on 126 patients with a previous transient mild glycosuria. Twenty diabetics were discovered 5-10 years after a recorded glycosuria—10 diabetics after more than 10 years.*

*Murphy, R.: Connecticut M. J. *21*:306, 1957.

COLOR CALIBRATED CLINITEST® Reagent Tablets
BRAND

the STANDARDIZED urine-sugar test
for reliable quantitative estimations

- full color calibration, clear-cut color changes
- established "plus" system covers entire critical range
- standard blue-to-orange spectrum long familiar to diabetics
- unvarying, laboratory-controlled color scale

AMES COMPANY, INC • ELKHART, INDIANA
Ames Company of Canada, Ltd., Toronto 43457

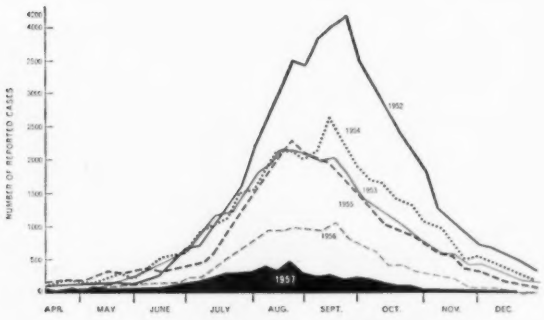


SCHERING CORPORATION • BLOOMFIELD, NEW JERSEY Schering

M-J-128

A MIRACLE IN OUR TIME?

At the last accounting,[1] physicians throughout the country had administered at least one dose of poliomyelitis vaccine to 64 million Americans—all three doses to an estimated 34 million. Undoubtedly, these inoculations have played a major part in the dramatic reduction of paralytic poliomyelitis in this country.



Incidence of polio in the United States, 1952-1957
(data compiled from U.S.P.H.S. reports)



vaccine is plentiful for the job remaining

There are still more than 45 million Americans under forty who have received no vaccine at all and many more who have taken only one or two doses.

As it was phrased in a public statement by the Department of Health, Education, and Welfare:

> *"It will be a tragedy if, simply because of public apathy, vaccine which might prevent paralysis or even death lies on the shelf unused."*[2]

Eli Lilly and Company is prepared to assist you and your local medical society to reach those individuals who still lack full protection. *For information see your Lilly representative.*

1. *J. A. M. A.*, 165:21 (*November 23*), *1957*.
2. *Department of Health, Education, and Welfare: News Release, October 10, 1957.*

Lilly
QUALITY / RESEARCH / INTEGRITY

ELI LILLY AND COMPANY • INDIANAPOLIS 6, INDIANA, U. S. A.
849008

Say you saw it in the Journal of the Michigan State Medical Society

The JOURNAL

of the Michigan State Medical Society

Issued Monthly Under the Direction of the Council

VOLUME 57 APRIL, 1958 NUMBER 4

The Pursuit of the Unorthodox

Some Observations on Certain Forms of Cancer Therapy

By L. H. Garland, M.B.
San Francisco, California

DUE, in part, to reports concerning the increasing prevalence of cancer, and to the acceleration of communication throughout the United States, the promoters of cancer remedies have recently become more active than ever before. There is hardly a day that does not bring to the headquarters of the various organizations dealing with cancer, an inquiry from an anxious patient concerning the merits of a proprietary remedy for cancer of which she (or he) has heard, and upon which she is ready to pin the shreds of a vanishing hope, if only she can find authority for doing so.

The confidence which seems to be instinctive in most people to heed anyone who makes a firm assertion of authority, coupled with the natural preference for medical over surgical or radiological treatment, lies at the basis of the extensive business which is being done throughout the country by the successful promoters of cancer cures. There appear to be more irresponsible persons in the cancer field than in any other. Their number in the United States is great, perhaps 4,000, and their influence extends into every town and hamlet. There are even charlatan hospitals with complete staffs, large buildings, and every appearance of sound fiscal backing. There are innumerable practitioners who do what may be called a small retail business. Finally, there are concerns which manufacture and supply cancer cures upon a mail order basis.

The claims of the charlatans are heard and heeded not only by people who have no knowledge of medical subject, but unfortunately, by not a few licensed physicians. These doctors use such "cures" in their practice, just as they buy and use scores of other proprietary medicines whose sales depends upon the clever manner in which they are advertised.

The suppression of such frauds is difficult. It is hard to prove that some materials are without slight beneficial effects, at least psychologic. Failure to secure prompt and adequate punishment of offenders may be turned greatly to their advantage, legal suits sometimes ending up as advertisements for their pretensions. The organized medical profession, more than any other group, has attempted to disseminate information on charlatary and protect the public from its evils.

The above words are taken almost verbatim from a report published thirty-four years ago by the American Society for the Control of Cancer. Today, over a third of a century later, they are still applicable.

Perspective

Quackery might be described as the world's second oldest profession. It is certainly as old as recorded history. The public has understand-

Dr. Garland is Clinical Professor of Radiology, Stanford University Medical School; Radiologist, St. Joseph's Hospital, San Francisco.

Presented at the Michigan Clinical Institute, Detroit, March 15, 1957.

able difficulty, at times, in distinguishing the orthodox from the unorthodox practitioner. After all, for many centuries the skin of the snake was accorded great medicinal virtue, and herbs, roots and decoctions were assigned magical properties. Sacrifices of animals were prescribed by apparently competent medical men. Even Socrates, after drinking the bowl of hemlock, asked a friend to sacrifice a cock to Aesculapius . . . perhaps to assure his survival to another dawn, or perhaps to impart to destiny the last thrust of a cynic.

In the dark ages, strolling quacks (tooth-drawers, uroscopists, rope-dancers, crystal-gazers and so forth) were a favorite theme of artists. Some of these pretended to cut stones from the head for the relief of insanity and I presume brain tumors. The therapeutic imposture consisted in making a superficial incision in the scalp and palming stones which were cast into a convenient receptacle at stated intervals during the patient's struggles. The trick is shown in a painting by Hieronymus Bosch, dated about 1500.

By the eighteenth century, quackery was regarded by Thoreau as universally successful, and uncommonly profitable. "Rolling stones, like Cagliostro, and Mesmer, managed to ply their trade for a long while without interruption. Casanova paid a decorous visit to Haller at Bern, and his stay with the great man was supposed to be not so much "the homage which vice pays to virtue" as a manifestation of genuine esteem, for Casanova not only affected to enjoy the commerce of the learned, but had written Latin dissertations or had some one write them for him. In England, there was a long line of successful medical charlatans of both sexes. The earliest of these was Sir William Read, who started out as a tailor, but in 1694 set up in the Strand as an oculist, having hired some one to write a book on eye diseases under his name, and a Grub Street poet to praise him in verse.

The tendency to consult charlatans is analagous to the physician's liability to consult wildcat stock brokers. Some of the most responsible physicians will always be in the hands of financial fakers, and, according to Robert Morris, some of the most responsible businessmen in the hands of medical fakers. They are as irresistible as fortune tellers.

The British Medical Journal devoted a whole number to the exposure of quackery in 1911. Like its American counterpart, the British Medical Association has been one of the few organizations to make serious attempts to take up the cudgels on behalf of the public in opposition to quackery.

In a monograph entitled "The New Medical Follies" Dr. Morris Fishbein[8] described two of the characters on the American scene in the early part of the current century, named Rogers and de Collard.

L. D. Rogers was once the head and chief owner of the National Medical University of Chicago (virtually a diploma mill). He developed a cancer serum and organized the American Cancer Research Society, with none other than L. D. Rogers as president. His autohemic therapy consisted of giving the patient a solution made by "attenuating, hemolizing, incubating and potentizing" a few drops of his or her own blood, and administering it according to a refined technique developed by himself. He advertised mail order courses for other physicians to the tune of $100, wrote a book called "Autohemic Therapy," and organized the Autohemic Practitioners.

Arthur de Collard went one step better. He turned up in Richmond, Virginia, in 1918 and persuaded the Legislature to license him to practice Poropathy. He claimed to be a cousin of Napoleon and a graduate of several European universities, but unfortunately all of his diplomas had been accidentally burned. The bill defined poropathy and manipulative surgery as a new branch of therapeutics, by which innumerable diseases, including internal cancer, could be cured. By 1927 there were several Poropathists in the State of Virginia who had taken the course under de Collard.

One of the most astounding cancer quacks of Western America is described by Dr. Hans Barkan[1] in his historical sketch of Cooper Medical College (the precursor of Stanford University Medical School) as follows:

"Certainly the most picturesque, even though later the most unsavory character in the faculty was Albert Abrams (1863-1924). Born in San Francisco, graduated in Heidelberg at nineteen, and in Cooper Medical College in 1883, precocious, of facile pen, of exceptional intelligence and productivity and of consuming ambition, he taught internal medicine and held the rank of professor of pathology from 1893 to 1898. His publications were numerous; his 'Diseases of the Heart' held the ranking place in textbooks on that subject. His outstanding contribution was perhaps his demonstration of the value of the x-ray in cardiac diagnosis. . . . In 1916 he presented

his new concepts in 'Diagnosis and Treatment; Physiochemical Medicine' and founded the *Journal of Electronic Medicine*, himself editing the first six volumes.

"The diagnostic technique consisted in placing a drop of the patient's blood in a box called a 'dynamizer' containing a 'jungle of wires, batteries and a rheostat.' The dynamizer was provided with an electrode which was placed on the forehead of a healthy subject—often this was his chauffeur—facing west in a dim light. From areas of dullness elicited by percussion of the healthy subject's abdomen, Abrams attained the diagnosis of either disease or religion. If this sounds absurd, consider the therapeusis of sympathetic vibrations supplied from another box, the oscilloclast; as adjuvants, vividly colored ointments supposedly of a certain radio activity were smeared over the patient's abdomen. The oscilloclast was rented to all comers, physicians and others, at $200 or $250, plus monthly payments of $5 for each machine. It was not sold—only leased—with a definite understanding that the machine was not to be opened by the lessee. In a few pages of eulogy by Upton Sinclair, one reads: 'The average charge is about $200 for a guaranteed cure of such diseases as syphilis, tuberculosis, cancer and sarcoma.' *The Scientific American*, after a year's investigation, concluded: 'At best it is an illusion; at worst, it is a colossal fraud.'

"At the height of the controversy, Abrams died a rich man in 1924. Harris, in 'The California Medical Story,' sums him up as: 'A tangential colleague possessing the boastfulness of Parecelsus, the self-deception of the alchemist, and the alertness, tenacity, and ruthless of the robber barons. The observing neurologists, thinking of his fixity of ideas, expanded ego and colored salves placed him among the mentally deranged.' "

The Menace of the Charlatan

From the above cursory review it is apparent that quacks are as old as human nature and as widespread as mankind. They vary from age to age like clothing fashions. Are they more of a menace today than previously? It seems to me that they are, because of the currently improved outlook for both the early and late case of cancer in the light of modern surgery, radiotherapy and chemotherapy.[9] Their menace might be summed up as follows:

1. The unorthodox practitioner accepts patients with curable cancer and uses worthless remedies on them until the cancer becoms incurable. Not only is this evil in itself; it has the secondary effect of increasing the public's fear of cancer because of the evidence of one more uncured case.

2. On patients with late cancer, the quack often uses methods far less effective to control the disease and make life comfortable than are available by the use of orthodox methods.

3. Quacks often exhaust the earnings and savings of those in limited circumstances, without according any benefit.

4. A few quacks cause diversion of large amounts of public and private money from the support of responsible cancer research.

Recognition of the Charlatan

Inasmuch as charlatans are found both inside and outside the medical profession, recognition is not always simple. Some quacks are unquestionably sincere; more give the semblance of sincerity. A common pattern is that of a lay person who has tried a remedy in one or two cases of alleged cancer and who believes he has found apparently good results. He spreads his results by word of mouth or by testimonial. He is often careful, at least initially, not to make written claims of a cancer cure. He will tell the press and radio audience that orthodox physicians are fearful they will lose their incomes from the surgical or radiotherapeutic care of cancer patients, and for that reason are opposed to his new method. If prosecuted, he will allege that the "medical trust" is against him, and that another Pasteur is being victimized.

A classical example of the evasive technique used by these persons is as follows. Mr. Hoxsey, a cancer clinic operator, had requested an evaluation by the National Cancer Institute of his therapy.[12] The Institute asked him to submit at least fifty records of patients with internal cancer, diagnosed by a competent pathologist, and with a survival of at least five years after treatment. Sixty case records were received, of which only nineteen were internal "cancers." Of these, only five had biopsy records, and none of these could be confirmed as cancer on examination at the Institute. The sixty case records were composed of forty alleged external cancer, nineteen of internal cancer and one of site unmentioned. The external cancers had biopsy data on only fifteen; the available slides showed no squamous cell lesions or melanomas; there were apparently a few basal cell carcinomas. In summary, two-thirds of the "cancers" had no biopsy at all; many of those which did have biopsy were not validated as cancer by the pathologist.

Recognition of the charlatan is aided by noting the following:

1. His treatment is usually secret, or the meth-

od of preparation is secret or it is available only from himself.

2. He uses advertising, planted stories or "testimonials" to support his claims—not reports in current, reputable scientific journals.

3. He often uses the name of a high-sounding research organization or foundation.

4. He discourages or refuses consultation with reputable local physicians, claiming that the "medical trust" is against him.

5. His records are scanty or nonexistent.

6. Many of his "cured" cases have no evidence of having had cancer when he treated them. He discounts biopsy verification.

7. His chief supporters may be very distinguished statesmen, actors, writers or lawyers—but not persons trained or experienced in the natural history or care of patients with cancer.

8. Following representations by the press or by legal authorities, he usually promises to make some of his agent available to an official health agency or medical commission for adequate trial. But he seldom delivers the promised drug or drugs, making a series of excuses such as the fact that there is great expense in producing the drug, or a lack of supplies of the basic ingredients at the moment, or a lack of packing facilities and so forth. If and when it becomes finally available, the method of administering the drug becomes complex and so personalized that virtually only the proponent can administer it effectively.

Such is the picture of the "average" cancer charlatan with whom we are familiar. Needless to say, the spectrum is disturbingly broad. At one end are rather reputable members of the medical profession who are simply misguided or uninformed on cancer therapy and who do not make a habit of seeking out cancer cases nor charge exorbitant fees for the rather useless remedy they use. At the other end, are the ghouls who operate an assembly line clinic, using methods they know to be useless and charging inordinate fees. The gross annual income of some of the latter is in excess of a million dollars; the harm they do to curable cases is incalculable.

What of the physician who uses orthodox methods but in an incompetent fashion? For example, the surgeon who removes only part of an excisable tumor, the radiologist who gives only part of the tolerable and necessary cancerocidal dose of irradiation, the internist who uses a "little" hormone or chemotherapy (when adequate dosage might mean the difference between short and long survival)? These men are sometimes called quacks by their brethern. They are not, in the strict sense of the word. They are the incompetent or conscienceless fringe which unfortunately exists in every profession. The public can avoid them only by using thought, diligence and consultation.

Investigation of Remedies

Aroused by some of the more recent developments in California, the Cancer Commission of the California Medical Association[17] undertook in 1952 to investigate certain unorthodox cancer treatments which were gaining mounting publicity in that state. The Commission functions as a body of eighteen members, all practicing physicians, most with considerable clinical experience in cancer work and many on the teaching staffs of the local medical schools.

The Commission first prepared a carefully worded "Statement on Cancer Treatment" and issued such to over 700 newspapers and other public media in California. It invited the proponent of any treatment for cancer to submit the method of treatment, with proper documentation, for adequate trial by responsible impartial investigators—with the understanding that the results of such tests, whether favorable or unfavorable, would become a matter or record. In other words, persons who believed that they had a new or better method of treating cancer were invited to submit their method for examination by qualified persons. This statement and the covering letter have been accepted for publication in a monograph (American Cancer Society, New York).

Since 1952, the Cancer Commission has completed studies in connection with three alleged cancer remedies and the results have been published in the official Journal of the California Medical Association *(California Medicine)*. In these studies, the Commission co-operated with and was aided by the Bureau of Investigation of the American Medical Association, the Federal and State Food and Drug Administration, and the Committee on Cancer Diagnosis and Therapy of the National Research Council.

As soon as the facts were established concerning these alleged cancer remedies, the Commission made available suitable report to the science

writers of press and radio, and to the branches of the California Division of the American Cancer Society.

In performing each of its investigations, the Commission has taken the following series of steps:

1. *Ascertain the precise nature of the treatment method.*—Frequently the method turns out to be an old one with a new name. For example, the Hepasyn treatment for cancer turned out to be Arginase (which had been previously investigated and unfortunately found ineffective). Sometimes the nature of the treatment method is shrouded in mystery. It took quite a few months to find out that the material from which Dr. Gregory made his cancer treatment, Gregomycin, came from a mold in his back garden. The precise method of administering the drug, the dosage, the intervals, the side-effects and so forth are elucidated as fully as possible, both by conferences at the local level and much correspondence.

When we prepared to call on the proponents of the Laetrile cancer remedy (made by the John Beard Memorial Foundation) we found to our astonishment that there were *two* John Beard Memorial Foundations, at two different addresses in San Francisco. The Foundations were not connected! The peripherally-located one housed our researcher; his laboratory consisted essentially of a small quonset hut in the back yard of a private house in which a vast number of empty ampules lay waiting to be filled with the chemical.

2. *Interview the proponents and review their scientific background.*—It is sometimes difficult to secure personal interviews, but they have been obtained. It is usually simple to ascertain the scientific background and the record of previous publications. Every effort is made to give the proponents full opportunity to present all available facts.

3. *Examine the experimental evidence offered by the proponents.*—This is not always easy; indeed, the amount of experimental evidence is often remarkably scant. All too often the "numerous laboratory animals" turn out to be a few mice or a solitary guinea pig. One of the researchers we called upon told us that he had a method for producing transplantable adenocarcinoma of the large bowel in dogs; we were particularly interested in seeing this, but unfortunately the dogs were unavailable at the time of our visit; and the technique not written down anywhere. The experimental animal proves often to be ectoplasmic.

4. *Examine the clinical evidence offered by the proponent.*—An attempt is made, with the permission and co-operation of the proponent and the persons involved, to see and examine treated patients, to review the microscopic slides, the radiographs and other objective evidence, and if necessary, to make fresh sections from the blocks removed. All too often there is no microscopic tissue available. When it is available, it is often found that the entire tumor has been removed surgically or destroyed radiologically prior to inception of the cancer treatment method in question. An attempt is made to have at least one well qualified surgeon, radiologist *and* pathologist at such review sessions. (The Commission has been fortunate in having Dr. Ian Macdonald, clinical professor of surgery at the University of Southern California, and Dr. David Wood, professor of pathology at the University of California available for continuing consultations.)

5. *Examine the autopsy data of the proponent.*—(If any is available.)

6. *Secure some of the drug for analysis and trial on experimental animals.*—This proves much more difficult in practice than in theory. However, means are usually found to secure enough for at least initial laboratory analysis. Disillusioned former clients of the healer have cooperated in securing some of the material for examination. The laboratories and departments of chemistry of some of the universities in California have been very helpful in performing necessary tests.

7. *Treat a small number of patients* (persons beyond reasonable hope of control by established surgical or radiotherapeutic methods).

8. *Examine the autopsy data if any,* on patients treated under the auspices of the Commission or otherwise.

9. *Consult with other investigating groups and research workers.*

10. *Following these steps the evidence is summarized and reviewed by the Commission.*—A report is prepared, cleared through legal counsel for the State Medical Association, and offered to the *State Medical Journal* for publication. If and when published, copies are transmitted to the American Cancer Society (and its branches), to science writers and to other interested persons.

Steps to Reduce Charlatanism

The members of the medical profession who belong to the American Medical Association have supported the Bureau of Investigation and the Committee on Research of that organization for many years (the former now for half a century). The Bureau has compiled data on countless cancer frauds and worthless treatment methods, provided chemical analyses of hundreds of cancer drugs and remedies, and aided Federal and State bodies in exposing charlatans. But that is not enough to cope with the hydra of cancer charlatanism. It needs nine times ninety arms in the different parts of the country to keep pace with the sprouting heads. Some of those arms could be state or regional cancer commissions.[17]

A Cancer Commission could, at the state or local level, investigate new or notorious cancer remedies, publish their findings and proceed according to the facts ascertained. If something apparently worthwhile materializes, the profession will be the first to study it—as it did in the case of insulin, the sulfa drugs, penicillin and other now-established agents. If, on the other hand, nothing worthwhile is disclosed, then the profession and the public should be informed. If members of organized medicine are reported to practice quacksalverism (that is, they continue to use for regular clinical cancer treatment, methods found by impartial study to be worthless for that purpose), they should desist, and, failing compliance, should be asked to appear before properly constituted committees of their county medical society to show cause why their membership should not be suspended or terminated in the public interest. The kernels of this aspect of the problem are an actively functioning cancer commission (to establish facts), and a courageous local medical body (to take action on members who are defrauding the public). In the case of physicians outside the ranks of the medical society, it would seem that the state licensing body or state board of medical examiners should evolve a mechanism for effective action.

If and when the medical profession takes steps to correct the situation in its own membership, it can then with reason request members of other healing-arts groups (such as osteopaths) to do likewise. Finally, it can go to the press, radio and television agencies with the documented facts on these efforts at public protection and request those bodies to lend their aid . . . so that quackery in non-professional spheres, that is, by laymen and cultists, may be curbed or reduced. The public needs and deserves frequent reminders that thorough scientific investigation of many cancer nostrums *has* been made—unfortunately without yet uncovering a more effective treatment for cancer than those already known.

In our own state, in a small way, we have made a few strides. As a result, at least three potential cancer cures have been deflated. In addition, one large Los Angeles daily newspaper rejected lucrative full-page testimonial advertisements from a notorious Colorado cancer clinic; at least one large broadcast service refused to relay a "planted" quack cancer-cure story; two worthless cures failed to obtain tentatively assigned research grants running into six figures; two members of organized medicine have been censured. And, on the positive side, we have succeeded (as have other states) in getting many press, radio and television releases on what the public should know and do to avoid falling into the hands of cancer quacks.

The public needs to be shown, as well as told. Science writers might agree to take the considered reports of the local cancer commission on a given cancer remedy and "show" step by step in lay language the type of investigation made and results. If there is a shred of hope in the proposed treatment method, the medical profession will have been the first to make further studies. In making public reports of quack remedies, it is usually advisable to omit the name of the proponent, because the very announcement has the effect of advertisement; however, the name of the remedy may be issued. One needs a delicate balance between notification and identification to effectuate the constructive action desired.

At the national level, in addition to the Bureau of Investigation of the American Medical Association, there is the Food and Drug Administra-

tion,[12,14] the National Cancer Institute and a recently formed Committee on Quackery of the American Cancer Society. These bodies all help in various important ways to investigate and report on differing phases of this repetitive problem; the F.D.A. aids in prosecuting certain offenders. Finally, there are the files of a group of physicians and scientists who functioned as an impartial board of experts to review, advise on and, if necessary, sponsor investigations of reported new methods of diagnosis and treatment. Known as the Committee on Cancer Diagnosis and Therapy of the National Research Council, the group was sponsored by the National Cancer Institute, the American Cancer Society, the American Medical Association, the Food and Drug Administration and others. It reported the results of its investigations to the sponsoring agencies. Its files are cared for by the American Cancer Society.

Some Current "Remedies"

The following current unproved or unorthodox cancer treatments will be briefly illustrated.†

Summary

History is veined with cancer charlatanism. Unorthodox and unproven methods of cancer therapy are still in extensive use today. The background of such therapy is one of unawareness or fear on the part of the patient, and ignorance or avarice on the part of the "healer." Its ultimate control is a problem of mass information—that many types of localized cancer are curable, and that medical research offers much hope for other types.

Wider understanding of the immediate situation by medical educators should lead to better instruction of physicians and some reduction in the extent of charlatanism.

In the past, the local medical profession has tended to rely on some distant agency (such as the Bureau of the A.M.A. or the Federal Food and Drug Authority) to investigate and report on local or regional cancer cures; it is suggested that such work can often be performed more effectively and speedily by a functioning state cancer commission.

It is therefore believed that regional or state cancer commissions should (where they have not already done so) develop facilities for making careful investigations of locally developing cancer treatment methods which are claimed to cure or control internal cancers or which have gained some notoriety.

Having made such tests, the commission should keep the profession and science news writers informed of the results, and of its other activities on behalf of the public.

Examples are mentioned of careful investigations of a few current cancer remedies, and of the beneficial results ensuing therefrom.

References

1. Barkan, H.: Cooper Medical College—An Historical Sketch. Stanford M. Bull, 12:145, 1954.
2. Cameron, C. S.: Beware the cancer quack. Cancer News (Amer. Cancer Soc.), 9:3, 1955.
3. Cancer and the Need for Facts. Report of the Council on Pharmacy and Chemistry. J.A.M.A., 139:93, 1949.
4. Cancer Cures and Treatments. J.A.M.A. Reprint, 1924.
5. Clark, W. D.: Report to Committee on Quackery. Amer. Cancer Soc., 1955.
6. Fay, Bill: Cancer Quacks. Colliers, p. 24 (May 26) 1951.
7. Field, Oliver: Bureau of Investigation. J.A.M.A., personal communications.
8. Fishbein, M.: The new medical follies. New York: Boni & Liveright, 1927.
9. Garland, L. H.: Cancer quacks; their menace and what is being done about them. The A. C. S. Volunteer, San Francisco (Feb.) 1955.
10. Garrison, F. H.: An introduction to the history of medicine. Philadelphia: W. B. Saunders Company, 1922.
11. Gelhorn, Alfred: Chemotherapy. Physiopathology of Cancer. Edit. by Homburger, F., and Fishman, W. H. Hoeber. New York: Harper, 1953.
12. Granger, Z. A.: Unorthodox cancer remedies. M. Ann. District of Columbia, 24:67, 1955.
13. Horton, C. E.: Quoted by "Time" magazine (Feb. 28) 1955.
14. Kerlan, I.: Devices and delusions. M. Ann. District of Columbia, 24:67, 1955.
15. Reports of Bureau of Investigation, A.M.A., "Nostrums and Quackery," 1912, 1921, 1936, et seq.
16. Smithers, D. W.: Progress in treatment of breast cancer. Lancet, 263:495 (Sept. 13) 1952.
17. The Cancer Commission of the California Medical Association. California Med., 83:104, 1955.

†The author showed lantern slides dealing with: (1) the Hoxsey treatment, (2) Koch treatment, (3) Krebiozen, (4) Lincoln (Bacteriophage), (5) Spears, (6) Savannah.

Selected examples of the following were also illustrated: Adrenal cortex extract, Arginase, Electronic Medical Foundation, Gregomycin, Hett (cancer serum), Institute of Applied Biology, Laetriles, Mucorhicin, Rife-Ray.

The Diagnosis and Treatment of the Less Obvious Carcinomas of the Thyroid

By Theodore Winship, M.D.
and Randi V. Rosvoll, M.D.
Washington, D. C.

THE DIAGNOSIS of thyroid carcinoma is often difficult to establish and when the primary tumor is small the difficulties are increased. The term "less obvious carcinoma" almost restricts this discussion to the consideration of the malignant tumors measuring less than 2 cm. in diameter. Approximately 18 per cent of thyroid cancers in our series fall into this category.

The small papillary carcinomas constitute by far the greatest majority of less obvious carcinomas. In a series of papillary cancers reported by Frazell and Foote, 15 per cent measured less than 1 centimeter.[2] They usually appear as firm, ill-defined gray nodules which may be mistaken clinically for adenomas. Characteristically, these tumors grow slowly and as a rule metastasize first to the cervical lymph nodes. Another type of less obvious carcinoma is the occult sclerosing carcinoma. These were originally described as benign tumors by Graham[4] and were later named nonencapsulated sclerosing tumors by Hazard, Crile and Dempsey.[5] Recently they were identified as small sclerosing papillary and follicular carcinomas and metastases were present in 30 per cent of the patients (Fig. 1). Occult sclerosing carcinomas measure less than 1 cm. and appear as small scars at or near the surface of the gland.[6] Follicular and undifferentiated thyroid cancers are occasionally small when discovered and would qualify as a less obvious carcinoma, but characteristically both types are bulky tumors.

There are five situations in which the less obvious carconimas may cause problems in therapy.

1. *Sometimes metastatic thyroid carcinoma appears in the cervical lymph nodes without a palpable primary tumor in the thyroid gland.*—This was true in 30 per cent of 334 cases of childhood thyroid carcinoma.[10] Enlarged persistent painless cervical nodes usually represent some other disease such as tuberculosis in the young or metastatic carcinoma from the head or neck region in older patients. When after careful investigation no cause is found for the adenopathy, a lymph node must be excised for diagnosis. The node should be submitted for frozen section and if found to contain thyroid tissue, a total thyroidectomy and neck dissection in continuity should be performed immediately. An unusual example of this type of lesion is presented.

Report of Cases

Case 1.—A white woman, aged forty-six, was admitted to the hospital complaining of a painless mass in her neck which had been slowly enlarging since its discovery five months previously. She had consulted her family physician about the nodule but had been advised not to bother it unless it bothered her. A neighbor's son, a senior medical student, recommended that the mass be removed for diagnosis. Physical examination revealed a firm, painless movable 4 cm. nodule in the mid-jugular region of the left neck. The thyroid gland was small, firm and smooth. The day after admission the nodule in the left neck was removed and submitted for frozen section. A diagnosis of metastatic thyroid carcinoma was established and a total thyroidectomy and left radical neck dissection were performed.

Multiple sections through the thyroid gland showed homogeneous, reddish-brown thyroid tissue without evidence of carcinoma, whereupon the entire thyroid gland was cut into blocks and embedded. All the paraffin sections of the thyroid gland showed normal thyroid tissue except one which contained a papillary carcinoma measuring 0.7 mm. (Fig. 2). Ten of the twenty lymph nodes in the neck dissection contained metastatic carcinoma.

Many other small tumors have been encountered but so far as can be determined this is the smallest ever reported to have produced metastases.

2. *When there is a nodule in the thyroid gland in the absence of palpable cervical lymph nodes.*—This is by far the most common situation. The

From the Department of Pathology, Garfield Memorial Hospital, Washington, D. C.

Presented at the 92nd Annual Session of the Michigan State Medical Society, Grand Rapids, September 26, 1957.



Fig. 1. An example of occult sclerosing carcinoma.

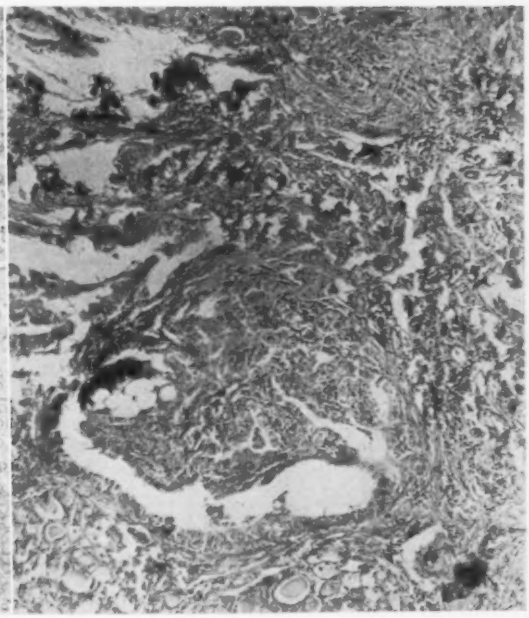


Fig. 2. Primary thyroid carcinoma in *Case 1* (measuring 0.7 mm.). This produced metastatic carcinoma in the cervical lymph nodes measuring 4 cm.

difficulty in making a pre-operative diagnosis of thyroid carcinoma depends upon training, clinical judgment and experience. Most surgeons admit that their accuracy is less than 75 per cent. Since small single nodules are removed only because of their possible malignancy a lobectomy should be performed and the specimen submitted for frozen section. If the lobe contains carcinoma, a total thyroidectomy should be performed immediately. If no enlarged lymph nodes are found during the surgical procedure nothing more should be done except for frequent follow-up examinations.

A case illustrating this type of lesion is presented.

Case 2.—A white woman, aged twenty-seven, was admitted for the investigation of a symptomless nodule in the thyroid gland. The nodule was discovered by her obstetrician when she was four months pregnant. She was delivered of a live male infant two months prior to admission. Although there had been slight enlargement of the thyroid gland during her pregnancy, no change had been noticed in the thyroid nodule. Following delivery, the gland had receded but the nodule was still palpable. Physical examination revealed a 1.5 cm. firm, nodule in the lower pole of the right thyroid lobe. At operation a right lobectomy was performed. A frozen section diagnosis of carcinoma was made and a total thyroidectomy was performed. Permanent sections showed a papillary carcinoma measuring 1.4 cm. in diameter in the right lobe. She has now been followed for five years and shows no evidence of disease.

Thyroid carcinoma associated with pregnancy is not uncommon since it is a disease frequently found in young women. Many of the patients with thyroid carcinoma discovered in childhood have subsequently married and have had children. Some of them are known to have residual carcinoma. Growth acceleration of the tumor has not been noted in any of these patients during pregnancy or lactation.

3. *When a thyroid nodule and enlarged cervical lymph nodes are both present.*—In this situation the decision to operate is made more easily than when there is no adenopathy. Few physicians will elect to "watch" a patient when there is clinical evidence of metastasis. The recommended procedure in this instance is lobectomy and a request for frozen section. If thyroid carcinoma is found, a total thyroidectomy is performed and a cervical lymph node is excised for

frozen section. If the node also contains carcinoma a radical neck dissection should follow.

4. *Rarely a nodule may present centrally in the isthmus, the pyramidal lobe or in the medial portion of either lobe.*—Resection in such a case should include the pyramidal lobe, the isthmus and a generous portion of normal thyroid tissue surrounding the tumor. When frozen section shows carcinoma, a total thyroidectomy is again indicated. Metastases from a mid-line lesion may appear in either side of the neck or both. If histologically-positive lymph nodes are present in one side, an immediate radical neck dissection is indicated. If metastatic carcinoma is present in both sides, one side of the neck is dissected at the time of initial surgery. This is followed in several weeks by a dissection of the contralateral side since considerable morbidity is usually associated with simultaneous bilateral neck dissections.

5. *A fifth type of less obvious carcinoma is the small unsuspected tumor found by the pathologist during the examination of a nontoxic nodular goiter.* The recommendation for a patient with bilateral multiple thyroid nodules is subtotal thyroidectomy. If such a procedure has been carried out, no further treatment is indicated after discovery of a small carcinoma. Such patients should be followed closely for at least ten years.

Discussion

During the past decade, the incidence of thyroid carcinoma in the United States has shown a marked increase. According to statistics from the New York State Department of Health, the incidence has doubled during the period 1940 to 1950 as compared to the previous decade. Similar data have been reported by numerous other investigators.[9,12] The increase has been mainly in the cancers which are less obvious. In the past, small cancers were often neglected or misdiagnosed. As a result, the majority of thyroid cancers excised were the large, far advanced tumors. Several factors are responsible for the increased incidence. Perhaps the most important is the reduction of surgically-treated nodular goiters in this country which has resulted in a relative increase in the number of thyroid cancers. The increased incidence reflects the growing tendency to investigate thyroid nodules and to excise, for diagnosis, unexplained persistent enlarged painless cervical lymph nodes in patients of all ages. Another factor responsible for the increased incidence is the better recognition of the disease by pathologists. Twenty-five years ago, most papillary tumors were considered to be benign, but clinical experience has proved them to be malignant and capable of metastasis.

Through the courtesy of certain physicians in several large clinics it has been possible to study many cases of thyroid carcinoma. These, in addition to the tissue slides on 202 collected childhood thyroid cancers and our own material, comprised 1,148 cases of thyroid carcinoma. The cases were classified in order of increasing malignancy as shown in Table I.

TABLE I. PATHOLOGIC TYPES OF THYROID CARCINOMA

TYPE	NUMBER	PER CENT
Papillary	788	62
Follicular	253	22
Undifferentiated	107	16
TOTAL	1,148	100

To avoid the use of a complicated classification which would be of no clinical importance, cases are grouped in three basic categories. The papillary category includes the rare, pure papillary carcinoma and also the more numerous mixed papillary and follicular carcinoma. The type designated as follicular represents those thyroid cancers composed solely of malignant follicles either empty or containing colloid. The undifferentiated group consists of the tumors which are neither papillary nor follicular in nature, the most common cell types being the spindle and giant cell carcinomas and the solid small-cell carcinomas.

Thyroid cancers differ from other types of cancer in that the majority are composed of at least two cell types. Cases occur in which three or even four distinct types can be identified if multiple sections are examined. This is the reason that special operations devised solely for the treatment of papillary carcinoma are illogical and unrealistic.

The treatment of patients with thyroid carcinoma is controversial. Disputes often arise over data based on clinically single or multiple thyroid nodules and their malignant potentialities. The clinical distinction between single and multiple nodules is often difficult and frequently inaccurate. More than 40 per cent of the clinically single

nodules in the thyroid gland on gross examination prove to be multiple. Discussions often arise concerning the percentage of carcinoma in nodular goiters and single nodules. Statistics vary so greatly regarding these findings that a definite figure cannot be given. The recommendation of surgery for thyroid nodules depends upon one's training, geographic location and philosophy of carcinoma.

While it is obvious that treatment must be individualized, the recommendation made by Ward[7] remains sound and justified. He stated that all thyroid nodules in men and children and all single nodules in women should be removed. The removal of a nodule infers lobectomy. Frazell[9] found residual carcinoma in approximately 50 per cent of the glands of referred patients after the original surgeon had enucleated an "adenoma." An enucleation or a wedge resection is in Crile's words "the most pernicious thing that a surgeon can do."[9]

After a diagnosis of carcinoma has been established, total thyroidectomy should be performed. This recommendation is based on three premises: (1) Intrathyroidal spread, although not common in our experience, still occurs frequently enough to justify the complete removal of the gland. (2) Multiple foci of carcinoma are said to be present in more than 10 per cent of all cases. (3) If the use of radioactive iodine is anticipated for the treatment of metastatic carcinoma it will be of little therapeutic value unless the thyroid gland has been removed. A subcapsular removal of the lobe contralateral to the carcinoma is recommended to assure the retention of adequate parathyroid tissue.

The great majority of surgeons agree that a radical neck dissection is indicated in the presence of cervical node metastasis. Some demand histological proof of metastasis while others require only clinical evidence. Frazell and Foote[2] showed that metastatic thyroid carcinoma was present in 61 per cent of clinically negative necks after proof of a primary tumor in the thyroid gland. In spite of this startling data we do not feel justified at this time in recommending a procedure routinely which will subject 39 per cent of the patients to an unnecessary operation.

The usual radical neck dissection for carcinoma includes the sternomastoid muscle. In selected cases of thyroid carcinoma in which this muscle is not involved by metastatic carcinoma it has been found that an adequate dissection can be accomplished without removing the muscle. This is of definite cosmetic value especially to young women and should be considered at the time of operation in every case.[1]

Surgeons have been skeptical about the ability of pathologists to differentiate between benign and malignant thyroid tissue in frozen sections. Most pathologists have been hesitant to accept the responsibility of making a frozen section diagnosis on tissue reputed to be difficult to handle. Learning that the procedure is successful in other institutions,[7] we began to freeze questionable thyroid lesions several years ago. To our surprise we found thyroid tissue only slightly more difficult to handle than many other types of tissue. Since that time, requests have been made for frozen section diagnosis on 170 thyroid glands. This represents 38 per cent of all the nontoxic nodular goiters removed during the past four and one half years. Twenty-four per cent of thyroids frozen were carcinoma. In seven instances a false negative report was rendered and there have been no false positive reports. This represents 95.8 per cent accuracy and indicates the reliability of the procedure. It is known that an equally good record is being maintained in several other institutions in this country.

Recent efforts to treat thyroid carcinoma medically are based on theoretical and known thyroid physiology. The inherent biological and growth variation of thyroid tumors makes the evaluation of any new therapeutic method difficult. Many years will be required to evaluate the role of dessicated thyroid in the treatment of patients with thyroid carcinoma. At the present time it appears justified in selected patients after all other recognized methods of therapy have failed.[8]

Surgically inaccessible metastatic tumor may be treated by radioactive iodine when sufficient functioning thyroid follicles are present. Probably less than 10 per cent of the metastases from less obvious carcinomas will show an uptake sufficient to be of therapeutic value. In a number of cases, disease has been controlled for several years and occasionally lung metastases have disappeared roentgenographically.

Published results of therapy show extreme variation due to selection of cases, different surgical

(Continued on Page 545)

Cancer in Geriatrics

By C. Howard Ross, M.D.
Ann Arbor, Michigan

DURING the past quarter of a century I have romped through life with the geriatric population. In late years I have expressed myself in medical print dealing with such subjects as "The Geriatric Personality," "Geriatric Exercise," "Geriatric Rehabilitation" and "Healthful Employment of Leisure Time."

Having traveled in such fields, it is now my peripatetic intent to wander among the geriatric citizenry who have suffered from cancer in one form or another—to declare the hard-won victories, where they were accomplished—and to philosophize on the admitted defeats without developing too laconic a leitmotif.

In every case of geriatric cancer, one must summon the forces at hand and make up his medical mind with which of the following three infinitives he will reside:

To cure,
To palliate,
To endure.

"The cure" involves complete eradication by surgery or irradiation or other means. "A cure" is also defined by the "evidence of successful removal" over a period of years, say five or ten.

"To palliate" is to live with the situation on somewhat of a compromised basis, with adjuncts of surgery, irradiation, or hormonal therapy. There is easement for the moment, or for the immediate future, but the eventual outlook becomes grave.

"To endure" implies a philosophical and medical approach to a hopeless situation.

From past experiences and from the result of consultation, I will now endeavor to make a fleeting survey of the human body, other than the central nervous system, and to select certain organs, associated with colorful personalities — in approaching the possibilities above referred to.

Presented before the Branch County Workshop of The American Cancer Society, Coldwater, Michigan, February 7, 1957.

Also presented before the Third Postgraduate Seminar in Physical Medicine and Rehabilitation, Bay City, Michigan, October 9, 1957.

The Face

A man in the ninth decade of life noticed a small indolent area on his right cheek, that bled daily following shaving. He then presented himself before a cultist who "dug the region" with a stick of lunar caustic. For a few months there was quiescence. Then he appeared in my office with a thumb-sized mass over the right zygoma of extensive basal cell carcinoma. He was immediately referred to a maxillo-facial surgeon, who performed a complete surgical extirpation, with a z-pattern of closure. There was also the assistance of radiation.

After two further years a tiny bud appeared over the scar. Further radiation therapy apparently eliminated this residual mass.

Time then passed. Coronary occlusion ended his full life after a lapse of five years. It was my opinion that he fulfilled his life's span. He was fortunate to possess a cancer that was "polite" enough to endure unsavory treatment and to respond to orthodox therapy.

The Lips

The most intimate association with cancer of the lip has had the signal honor to reside within my own body. It began with a pearly border about a crusty base at the lateral aspect of the lower lip. An occasional small fissure occurred, which healed after a fashion. As the inquisitive tongue and exploring teeth investigated the area, small shreds of flesh yielded to such an invasion. These combined factors plus positive biopsy led to an early diagnosis. The removal involved surgical and chemical cautery, without neck dissection. The passage of twenty-seven years declares a cure. However a warning must be interjected. *If the element of time has become a factor, there is little hope of recovery without lymphatic neck dissection.*

The Throat

An elderly neighbor of mine was struggling with his car, stuck in the snow. He was a merchant of

sixty years' experience. I picked him up and gave him a ride downtown to his store.

As we rode along and talked, I noticed that his usually musical voice had now become dull and husky. Upon inquiry, he stated that he had been slipping for six months. Further pointed possibilities were made. He said, "That makes two of us, including my sister. If it is a cancer, what is my next step?"

I referred him to an eminent otologist, who removed an involved vocal chord and followed with radiation therapy. Later, this man was referred to a speech therapist. He finally was able to express himself in a hoarse whisper. While he attempted no further sales work, he was very capable in his managerial assignments. He lived on for six years and apparently died of other causes than cancer.

The Tongue

A professor from the University of Michigan had reached retired status and was immediately snapped up by a small college. He made an excellent adjustment and secured much happiness in his newly-found role, which continued his active life.

After a few months' time a student said to him, "I have been watching you as you talk; there is a lump that seems to bob under the angle of your jaw, and it is getting larger each day."

A hasty visit to a local physician resulted in a careful examination with diagnosis of "carcinoma, base of tongue, with local metastases."

Surgery was not performed, but an extreme course of radiation therapy was prescribed. The lectures continued, and a cure was pronounced.

Within two years his body began to fail; his arms and legs became awkward. He finally took to his bed with advancing weakness and paralysis of the extremities.

Death, which was just around the corner, moved in quickly, nominating for a companion—terminal pneumonia.

The studies which followed sired the conclusion that the cancer had been eradicated, but the radiation required had fatally damaged the spinal cord.

Here is splashed the thought that *further research is necessitated in dealing with delicate neighboring structures in close proximity to the fields of therapy.*

The Thyroid Gland

In the medical school days "the hard palpable mass in the thyroid gland" was eternally drummed into our ears with baleful significance. In some recent months, I was examining an elderly woman who had suffered an automobile accident. There were many abrasions and contusions over the entire body. Therefore, a most careful systemic examination was made, including the palpation of the thyroid gland. A firm mass was discerned in the middle of the right lobe. It was agreed that as soon as she recovered, there should follow basal metabolism tests, blood cholesterol levels, radioactive iodine uptake test, followed by a referral to an eminent thyroid surgeon.

One day she stumbled on a step—fatal interlude—and fractured her hip. The neighbors rushed in, called the ambulance and had her admitted to a neighboring hospital, without the courtesy of informing me of my patient's plight. A moral could be written at this juncture, bearing a two-edged sword.

As the weeks passed, and the patient had not presented herself, I became alarmed and made urgent inquiry, discovering the hip episode, *ex-post-facto*. I immediately passed the word along that I feared a thyroid cancer. It was then agreed that she was in no condition for other than bone and joint surgery at that particular time. She was finally sent home.

With reports in the offing, again she experienced a dramatic change in her life. She contracted a respiratory infection, became cyanotic and all but choked to death. The thyroid gland had grown to enormous proportions, and her trachea was deeply compressed. She was rushed to our hospital and placed in an oxygen tent. The diagnoses included the following: (1) pneumonitis, (2) pulmonary embolism, (3) pulmonary edema, (4) compression of trachea, (5) compression of esophagus, (6) carcinoma of the thyroid gland, with metastases.

Her condition was desperate, indeed. In order to maintain an airway, an otologist was compelled, with permission of surgery, to incise the carcinomatous thyroid and insert a tracheotomy tube. Also a polyethylene nasal catheter permitted feeding of blended foods.

Now came the fateful decision. What of future surgery? The patient affirmed categorically that her religion would forbid blood transfusion. In

that case, the surgery department abruptly retired from the field, and she was presented to the department of roentgenology for radiation therapy. The three weeks involved were tolerated much better than we expected. The thyroid gland then decreased to about one-third of its former malignant size. The patient for a time could swallow a soft and liquid diet, but later returned to her nasal catheter feedings.

A rosette of flesh grew about the tracheotomy tube. Biopsy revealed a metaplasia of the original carcinoma. Further radiation reduced this mass, although the patient terminated her series prematurely.

Almost two years have passed since the first neoplastic hint of diagnosis was made. She can barely create audible speech and must employ penmanship for full expression of her needs. Her general bodily nutrition rose and then fell as the months passed. Her spirits, at first victorious, have now sagged. She gained a one-sided victory over the surgeons, but time and tide and prejudice have treated her nefariously.

A series of devilish circumstances encircled all possibilities for actual cure of thyroid cancer. If surgical extirpation had actually occurred in the early stages of the tumor development, the department of radiology would have found sympathy for the employment of radio-active iodine in post-operative therapy. The patient's determination to avoid blood transfusions, plus time delays, sealed her certain doom.

The Lung

Recently at Ann Arbor, the University of Michigan has instituted a geriatric program whereby all professors approaching retirement furlough may have the privilege of a complete examination and investigation of bodily systems.

One of our most healthy and vigorous citizens, without any symptoms or complaints whatsoever, was found to have an early carcinoma of the lung. Operation immediately followed. Regardless of his future, the moral holds in maintaining the slogan of early detection and eradication of cancer.

A sadder tale deals with a somewhat younger man, who suffered hemoptysis associated with pneumonia. The sputum was negative for acid-fast bacilli. Pulmonary x-ray studies revealed a subsiding pneumonia but ruled out tuberculosis and new growth. However, in a few weeks a vast hemorrhage poured from his lungs, and he died during the episode. Postmortem examination revealed extensive pulmonary carcinoma. The department of roentgenology was not convinced by reviewing its films. However, the patient was thoroughly dead. I do not recite this case from the standpoint of hopelessness, but bring it to the front to urge vigil beyond the peradventure of a doubt.

The Breast

There is much folklore associated with cancer of the breast, and I have actually observed some of its creation.

Once I was asked to make a geriatric call on a contrary sort of old lady, who snapped at me, "I have a back ache. No examination, please, just pain medicine for a back ache."

My counter-move was a complete examination, with much female sputtering in remonstrance, but withal—yielding permission on a piece-meal basis. When I arrived at the mammary level, she feigned modesty with vain attempts, clamping down with both hands, hiding the areas to be scrutinized.

I lifted one hand a mite and found a fungating cancer. Then indeed she wept in deep frustration, admitting that I was the only one to discover the secret that she had successfully hidden for three years. X-ray studies revealed numerous metastatic areas in the lungs and lumbar spine. Her back ache had indeed caught up with her.

The referring surgeon removed the foul-smelling fungating breast mass. There was palliative radiation. The trend, however, was rapidly downhill. She had sealed her own fateful outcome.

The same type of introductory experience applied to a much older individual, far into her eighties. Again the period of lesion, known only to the patient, concerned a span of three years or thereabouts before she submitted herself for investigation. Surgery and radiation were the methods of attack, in spite of the great time loss. A committee of physicians listened to my testimony, and testosterone propionate was the hormone of choice. Two successful years followed. Then one day she reached for a magazine and felt a snap in her left tibial area. She had experienced a pathological fracture, associated with metastatic bone cancer.

Radiation therapy was applied to this lesion, and her leg was placed in a simple padded trough splint, permitting physiotherapy. The fracture sight healed more or less.

After a further year, numerous cancer buds ap-

peared about her breast skin graft. Again radiation therapy and a step-up of her testosterone propionate medication came to her temporary rescue.

She did her housework from a wheel chair and smiled her way through a geriatric and neoplastic life, passing the ninety mark before death overtook her. There was happiness almost to the end.

Daily she quoted the old German proverb: "Von uns die Arbeit, Von Gott den Segen." (From us the work, from God the blessing.)

Her death was cardiac in origin, although her cancer status was always hovering in the accommodating background.

A further elderly widow in her early nineties suddenly passed a bloody urine. After a complete examination, including referral for cystoscopic study, we found a primary carcinomatous papilloma of the bladder and primary cancer nodules in both breasts. Electrical fulguration of the bladder papilloma was the treatment of choice, and no further clinical complaints were registered in this field. The surgeon in consultation refused to touch the breasts surgically. I discussed hormone therapy with a committee of physicians and with the patient. She refused the needle and accepted whatever treatment we could crowd into "three pills a day and no more!"

That left me no choice but to administer testosterone propionate by mouth, 10 mg. morning, noon and night.

In one year, I could barely palpate her mammary masses. In two years, they left only tell-tale geographical dimples. In a little over three years she had died of cardiac causes. I am not gullible enough to believe that we cured her three cancers, but at least they were submissive to our therapy and did not enjoy too liberal a suffrage at death.

On the other side of the slate, reposed a minister's widow in her mid-eighties. She requested periodic examinations. At one occasion I noticed a small nodule in her left breast. Following referral to general surgery she underwent a simple mastectomy versus the radical procedure (surgeon's choice). Five years later, there was experienced a nodular return in the line of scar. Then the patient was submitted to a radical extirpation with complete dissection of the left axillary lymph glands. However, the "too late" appellation was whispered to us by the Grim Reaper within a year.

This dear old lady had demanded that I hold her heart in my hand at autopsy, as she feared being buried alive. I fulfilled her wish to the letter. Her life was full and sweet and long in spite of breast cancer.

The Stomach

In my early practice, I met a patient in his eighties who related to me how he had "cured a cancer with gas drugs." For two years he had called regularly at a bargain counter, hovered over by an unctuous man in white, and received some mysterious nostrum that he took faithfully every hour on the hour while awake. Finally he found favor from neither food nor pill and stopped eating altogether. His family reluctantly called upon me to view this miniature of a man, emaciated to the bone and tied together with pale parchment, revealing a large firm mass in the epigastrium.

Upper gastrointestinal x-ray series revealed a narrow lumen in the stomach, the organ itself having become almost entirely carcinomatous. The end came soon with relief to his turmoil.

The forboding destruction of such a patient is drastically sealed when false medication and phantom hopes forbid an early examination.

Cancer of the stomach demands diagnosis in the primordial stages. Even then, surgery may become a heroic approach to a sad series of disaster tables. The x-ray department and the gastroscopist are the stalwarts in diagnosis. Gastrectomy remains the only hope.

We were doing the plays in New York one summer. As we poured out into Broadway at the midnight hour, I stepped into a wide open and brilliantly lighted drug emporium to make a minor purchase. There lined up ahead of me was a faltering old woman, muttering to herself. She was "skin and bones in calico," holding her stomach and complaining at a great rate to the clerk, a counter's width removed. This pompous youth, with saucy moustache, drew himself up proudly and said, "Madame, it is plain to see that you are suffering from an acidosis."

She replied, "I am? Oh, how wonderful to find someone who can help me. Now, what do I do?"

"Ah, this is simple," said the super-salesman. He busied himself behind the counter, presenting the lady with a lavender-wrapped package and barked, "Three dollars and seventy-five cents, please." There were words of mumbled thanks, and she made for the door, reciting his dicta over and over to herself.

I approached this metropolitan witch doctor and inquired, "What's wrong with me?"

He snapped back, "I would say, sir, that you are most likely a physician and incidentally a very evident eavesdropper."

In some ways he was a crafty fellow. However, by his greed he became a partner in biological crime.

My wife and I overtook the old lady and urged her to report to the outpatient clinic of Bellevue Hospital, first thing next morning. A promise was extracted. What mysteries of disaster that were unfolded, we will never know. Our fears, however, settled about the diagnosis of far-advanced carcinoma of the stomach; but again, through her own machinations, it was very probably too late.

The Small Intestine

Several years ago an elderly man in Ann Arbor was knocked down in the street by a car with bumper-belly approach. He underwent a severe abdominal cramp and shortly afterward passed a sizable quantity of blood. Emergency surgery by a competent man revealed a carcinomatous plaque of the ileum, which was hemorrhaging.

The surgery performed (during transfusion) included ample removal of the gut on both approaches to the lesion, plus careful dissection of the neighboring lymph glands. The latter were declared to be pathologically negative. The patient made an excellent recovery. He is still living.

I do not recommend the onrushing automobile as a diagnostic aid for the gut. However, in this case, the early diagnosis was obtained via violence, but excellent employment was made of the total circumstance.

The Colon

I recall vividly the case of the man with renal colic. The complaints included nausea, vomiting, pain in the right flank and bloody urine. The intravenous pyelogram revealed a small stone about to leave the right kidney. The calculus was passed in two and one-half days.

The department of genitourinary surgery discharged the patient. However, the gross vomiting was somewhat of a warning for advanced years. I, therefore, insisted he remain in the hospital for complete gastrointestinal x-ray investigation. There, in the ascending colon, was plainly visible an annular constricting lesion. Successful surgery removed this carcinoma plus contingent gut, afferent and efferent. Dissected glands were interpreted as pathologically negative. The patient lives on successfully.

Here the renal calculus was the original exciting cause for investigation in another system entirely. Our inquisitive nature merely spread to neighboring fields, where enough evidence warranted surgery, which prevented a future calamity.

A lady in her seventies underwent profound constipation, followed by almost complete obstruction. She was a Christian Scientist, refusing any suggestion of surgery but accepting gastrointestinal roentgen investigation. An annular obstructing lesion was revealed just above the cecum. After hearing me recite the story of "the dam of leaves in the gutter," she and her practitioner finally agreed to surgery.

Eighteen inches of gut fell before the scalpel of the surgeon, including involved lymph glands. She died a cardiac death soon after surgical interference, and time did not grant us proper evaluation. At least her remaining life was free from obstruction, which was a hard-won victory.

The Appendix

A man, not acutely ill, complained of some discomfort in the right lower quadrant. There was slight nausea with some rebound tenderness. The temperature was 99 degrees; the white count report was in the higher register of normal. Urinalysis revealed many bacteria in the stained sediment of the catheterized specimen, for which the patient was medicated. The consulting surgeon refused interference, nodding negativity at the abdomen and significantly at the laboratory reports. After the urinary infection had cleared up, I submitted my patient to gastrointestinal x-ray investigation. The appendix was rectro-cecal, only partially visualized and bore a doubt as to movable tenderness. In the right lower quadrant nagging discomfort remained.

The patient and I held a meeting and voted unanimously upon an elective appendectomy. This was finally performed, after some departmental skirmishing. The pathology report revealed early carcinoma of the appendix, a diagnosis far beyond my ability of discernment.

The patient was again submitted to laparotomy for lymph gland dissection, with positive metastatic report in one node only. The years have passed, and this man remains in good health.

A similar situation is now related, where roent-

gen investigation revealed a "non-functioning gall bladder." The surgeon's decision to remove this poorly functioning organ gave the pathologist "the glee point of his life." Carcinoma was found, but the patient lives on, as metastatic spread had apparently not reached the liver or other organs.

If a moral can be drawn, I would say that all means of diagnosis and all possible hunches, even though they merely border on the scientific side, must be fulfilled, when we track down cancer.

The Sigmoid Colon

Years ago I made the acquaintance of a southern gentleman of the old school. He spoke with slow precision, and western Tennessee accent dripped out with every syllable. He was an advertising man of great ability. Now, he became withered. Said he, "Give me a loin cloth and a goat, and I'll put Mahatma Mohandus Gandhi to shame!"

His eyes lost their sparkle. The bloom left his cheeks. His writing ability faltered, and he was about to lose his job. He refused an investigation, that would involve monetary values, but settled for a vitamin tonic. He then proceeded to gain fourteen pounds in as many weeks; the roses returned to his cheeks; his writing ability ascended to perfection, and instead of the "cold shoulder" he received a promotion. He declared in no uncertain tones, "No more tonic!"

I remonstrated with him, outlining his many victories. He calmed me with this remark, "So—order the God-livered bug juice."

Then he countered, "But I'm a-spillin' blood."

Now came much delayed roentgen investigation. A constricting defect was revealed in the upper sigmoid colon.

A capable surgeon performed the laparotomy; he found a carcinoma of the sigmoid with extensive glandular involvement. A colostomy was performed, and "he was sewed up to die."

The patient philosophized, "In Nashville, Tennessee, where I come from, I belong to the blue-bloods. My great uncle Jim, the best President these United States ever had, lies buried on the State House lawn. Down there I'm indeed somebody. But up in this damn-yankee country, I'm just an interestin' gut."

I began to undermine the department of roentgenology with a series of naggings and suggested with plaintive pleas that we might be facing a radio-sensitive neoplasm. The roentgenologist, in one of his weakest moments, agreed to therapy.

The colostomy closed of itself. Health and vigor were enjoyed again. Fourteen years passed by, and then death followed a repetition of the old lesion. However, the patient lived from his sixties into his seventies and completed the education of his family, to say nothing of becoming the chief welcomer to the third generation.

Apparently this lesion was radio-sensitive for years but not for life. Here palliation was almost the answer, but a riddle still remained to be solved.

The Rectum

A woman, firmly in her eighties, presented herself with the complaint of profuse rectal bleeding. Digital examination revealed an enormous fungating mass about five centimeters from the orifice.

I immediately called a properly trained surgeon, gave the patient a note of referral and sat back quite satisfied with myself.

However, there is many a slip. On the way to the hospital, the daughter suddenly brought up the subject of a "cancer specialist" in another country. Straight for the international boundary they fled, leaving the surgical consultative appointment delicately in the lurch.

They had barely been introduced to the wordy one, his sweet speech fairly dripping with mahua butter, when his nervous needle began to operate. After twenty injections of the "miracle serum" at $50.00 a throw, and after all "contact members" of the family had received "prophylactic injections" ($25.00 each), the bubble began to burst. The patient finally returned to my office, depleted in cash, deflated in spirit, denuded of flesh, and thoroughly whipped.

This time I was the chauffeur, and no "international shunt" was indulged in. Palliative surgery with colostomy was performed. The patient survived for three and one-half years.

A thunderous moral can be drawn both as to cultist's claims and the disastrous delays resulting therefrom. Even though the "miracle injections" should consist of harmless rain water, in the hands of a malignant quack they produce the tardiness that nominates death.

The Ovary

An elderly woman neglected her bulging abdomen. A gynecologist finally removed a large ovarian cyst, which was carcinomatous, with spread to the

sigmoid. She was sent home to die. Colostomy aided daily evacuation of the bowels. All opiates and barbiturates failed to aid her discomforts. Demerol was a child's toy. It became necessary for me to speak the truth to her, as she was necessitated to set her affairs in order.

Generally, I am honest with such neoplastic patients. Otherwise, the doctor comes and the doctor goes, and the patient loses faith daily. Also, to avoid the truth makes one live an actual lie, but to speak the truth, albeit a bit sugar-coated, does the patient much more good than harm.

Her main appeal was for a bit of comfort while her life lasted. In desperation I prescribed thorazine. She became immediately comfortable and remained so until her death. This drug has failed for some but has proved victorious for the many who are classified as hopeless.

There are many further experiences with ovarian neoplasms, but I would summarize them all by urging early reporting to the physician, when changes in bodily contour or function are observed.

The Uterus

A lavender and old lace widow, aged seventy, presented herself for a pre-marital examination with no complaints registered. She was the picture of health, with snappy eyes and milk and blood complexion.

During the examination, the vaginal speculum revealed a slightly bloody ooze from the cervix. I submitted her to a well-trained gynecologist. Dilatation and curettage followed. The pathologist gave a negative report.

The patient and I were not satisfied. Marriage was delayed. In three further months I requested a repeat curettage, somewhat with objections hovering. On this occasion a "fish roe mass" was presented. The pathologist now rendered a diagnosis of adenocarcinoma of the uterine fundus.

Our lady spoke up, "I've had my day of laughter. I don't fear death. That is a pastime we must all face. I only fear being thrust upon a new husband as a hopeless invalid."

The patient underwent a complete hysterectomy, combined with radiation therapy. Marriage later followed. Twenty years have passed, and she is a widow again, hale and hearty.

The conclusion to be drawn: *A negative report, in the presence of clinical evidence, cannot rule out cancer. This same dictum also applies to the modern Papanicolaou Stain.*

The Cervix

I inherited a woman, aged seventy-nine, thirteen years after she had undergone radiation therapy for carcinoma of the cervix. She was now in the last stages of generalized carcinomatosis. She operated a "Woman's League House" for the University of Michigan. Twenty-five young women from the Near East were due to arrive in a week. The University officialdom felt that death or a close approach thereto would not serve as a jovial reception-technique to the newcomers. The patient was asked to be transplanted to a convalescent home.

She promised me that she would be dead or removed by midnight before the onrush of foreign youth into her home. She never left the house. At 10:00 p.m. on the fatal night she folded her arms across her chest, closed her eyes and apparently died under her own compulsion. Her son and daughter carried on her duties, as promised.

This woman had lived a long, useful and puritanical life after the declaration of her original diagnosis and institution of treatment. Her death by self discipline reflected her devotion to duty and was in keeping with the rich pattern of behavior that she had set for herself.

The Prostate Gland

A vigorous man in his mid-eighties carried on his activities as farmer, performing many useful chores about the place and charting production reports of the land, stock and dairy divisions. The "scut work" was performed by the son and the hired man. It is beyond my sphere of understanding how such a splendid specimen of humanity should visit a bargain counter regularly "to make the kidneys work."

One evening he called his "talk doctor" by phone and said, "My kidneys hain't shown nothing for three days and nights."

The great wise one at the other end of the line countered with, "Then double the dose." The patient was perplexed only a moment. Then he rang again. After an interval of time the "soda squirt" answered. The complaint was repeated. The lad, barely sixteen years of age, whispered into the phone hoarsely but fiercely, "For God's

sake get a doctor!" Finally that night the two of us met. I found the poor fellow with his bladder line raised to the equivalent of a six-months pregnancy. The prostate was enlarged and bone hard.

He was admitted to the hospital at once. Genitourinary consultation was secured and the bladder was decompressed. Later, the patient underwent a transurethral prostatectomy and extensive cancer was revealed. With some argument, castration followed, albeit our sufferer said in his nicest English, 'If they must go, they must go, but they do dress a man up so." Postoperative diethylstilbestrol was prescribed.

This man still lives, after the passage of six and one-half years. Lighter farm chores are indulged in. One day at the farmers' market he "yoo-hooed" to me a half hundred feet away, pitching his high tenor voice above the cackling of the chickens and the Swabian accent, with this announcement, "Doctor, Oh Doctor, the fountain is working beautifully."

Again the calamity of nostrum delay is pointed out with deadly aim, even though this particular rescue is still operating favorably.

The Kidney

A wiry man in his later sixties became aware of a vague discomfort in his left flank, associated with weakness and a degree of encroaching debility. After six months of prophetic invaldism he suddenly and dramatically gushed a large urinary hemorrhage. After admission to the hospital and consultation, retrograde pyelogram detailed a large defect in the right kidney.

At surgery, the organ involved was grossly enlarged and deformed. A sizable foul carcinomatous area had become degenerated and ruptured into the kidney pelvis.

Nephrectomy was performed by the referring surgeon, including dissection of metastatic glands. The patient remains an invalid.

By some means this man should have been captured and diagnosed six months earlier. He and his wife both admit it. She plainly states that she does not perfer the status of widowhood. They merely affirm that they were hopeful "Things would ease up on the brighter side." Looking backward they both feel they were amply warned by nature. However, they turned their back on biological promptings as were given but also squelched their own intelligence.

The Extremity

A stouthearted farmer of seventy-two recited to me the story of an indolent finger ulcer that lingered a year and a half without much pain. Upon examination, there was squamous cell carcinoma. Before the digit was enucleated, the radiologist treated all lymph channels of the arm up to and including the axillary nodes.

Following finger amputation, our agricultural enthusiast returned to his farm and lived out his life to the age of eighty. He died of primary carcinoma of the liver. The pathologist claimed that this new lesion was not metastatic from the finger. Deep inside of me I have incubated some doubts.

When a lesion is out in the open and invites attention daily, one lingers along a sharp razor edge of wonderment at any prolonged delay to the medical paths of complaint and inquiry. It becomes difficult, however, to render a firm and pointed lecture after the damage is done. Nonetheless, by intelligent educational propaganda the stumbling blocks for others can be avoided in advance.

The Leukemias

An anemic man in mid-sixties was going downhill fast with myelogenous leukemia.

He underwent blood transfusions and was submitted to a series of radiation therapy. Also he received some of the newer chemical approaches to palliative care.

There were remissions and exacerbations. However, he lived into his seventies and carried on a half-time business.

Finally, he grew an enormous mass behind the right ear which no longer responded to radiation or chemical therapy. Death followed.

In this case, the patient lived a good life span, which is not always the experienced finding. Here, I believe the world is waiting astutely for a research solution.

Other Organs

The central nervous system has not been discussed and I shall assign the subject, including the eye and ear, to masters in their isolated fields. Also, where my critics find omission, they are invited to fill in the gaps.

Primary cancers of the liver and pancreas are the present stumbling blocks in diagnosis, as we

cannot properly delineate these organs by contrast media in roentgen study, except when contour shadows invade a viscus outline. On many occasions by the time a diagnosis is made, the news is late and the process is well advanced.

Peritoneoscopy has become an aid in creating an "eye view" of abdominal organs via a minor incision. However, please remember that the pancreas is retroperitoneal. Biopsy material from some organs can be obtained for diagnostic study by the consulting surgeon. Alas, I can recall no case, however, in my series where a life was saved by early diagnosis in these two fields of hepatic and pancreatic neoplasms, although a younger woman in the Ann Arbor area enjoys a six-year survival following total pancreatectomy. If this situation is true of myself, it is true in the case of many.

Conceivably, a small isolated cancer could be found and removed before symptoms and before spread. But by what means shall we discover this cozy situation?

Early jaundice, not well explained, has yielded to laparotomy, with carcinoma found in the head of the pancreas. Removal of "the head" plus duodenum (Whipple operation) has brought forth cures for a number of years. While the percentage of salvage is woefully low, I see no reason why the devoted surgeon should stop struggling with such serious problems. The alternative is "Know nothing, do nothing." Therefore, except in a few assumed select circles, more research is required and more intelligence must be mustered than has been witnessed in the past. Those of you, who have good news to offer, please contact me at once, and I shall remain deeply grateful.

Growths in the bone structure become only a fleeting pastime with me. They are referred to bone and joint surgery so fast following roentgen study, that the patient meets himself going out before he has barely entered my office.

Neoplasms of the penis and testes are by location available for inspection in the early stages. I have been able to detect modifications of contour in routine repeat examinations, with quick referral for genitourinary surgery.

Early circumcision is a proper prophylaxis against cancer of the penis. It is difficult to believe, but patients have come to me boldly stating that they were aware of contour changes over a period of time and then let the months pile up before seeking medical advice. He who fiddles with time fascinates only the Grim Reaper.

Summary

In dealing with the geriatric cancer patient, I have attempted to recall certain personalities, whose lives could serve as teaching agents, whether combined with diagnostic victories or defeats.

Again I wish to emphasize the three philosophical approaches to therapy, consisting of the cure, palliation and endurement.

Quick detection is the watchword of the twentieth century. Removal by surgery and radiation remains our present best approach. The isotopes of the future will open wide the fields of therapy.

Chemotherapy, such as the nitrogen mustards and hormone therapy will wend their further way into our armamentation of treatment. The future may experience a place for certain antibiotics, and even vaccine prophylaxis may have its day in the offing. We applaud every step that properly advances its way in scientific research.

The further education of the profession and the public is urged. We all abhor the nostrum shunts that produce diagnostic delays and, therefore, become the great killers in geriatric cancer.

The warnings of nature include the following, which are signals for medical inquiry and interference: (1) indolent ulcer, (2) pearly plaque, (3) persistent hoarseness, (4) modular areas, (5) tumor in any part of the body, (6) abnormal bleeding, (7) abnormal function, (8) unusual bodily discharge, (9) failing appetite, (10) pain, (11) change in bowel habits, (12) urinary retention, (13) anemia, (14) weakness, (15) change in color, (16) loss of weight, (17 cough plus time (if tuberculosis is uncovered no harm is done, I can assure you), (18) change in contour.

There are probably a hundred further signs. The above items are only an introduction to the list.

My last word of plea has to do with human intelligence. *When the patient himself knows of the signs of departure from normal and then experiences these same signs, without seeking medical aid, he has practically resigned from the human community.*

References

1. Anglem, Thomas J., et al: The prognosis of major surgery for cancer of the aged. J. Am. Geriatrics Soc., 7:988 (Sept.) 1944.
2. Anglem. Thomas J., et al: Evaluation of major

surgery for cancer of the aged. J. Am. Geriatrics Soc., 4:336 (Apr.) 1956.
3. Bowden, Lemuel: The patient with incurable cancer. J. Am. Geriatrics Soc., 4:438 (May) 1956.
4. Case, Thomas C.: Treatment of carcinoma of the breast in the aged. J. Am. Geriatrics Soc., 4:292 (March) 1956.
5. Cancer Prevention Center of Chicago: Pelvic findings in women past sixty-five. J. Am. Geriatrics Soc., 4:1 (Jan.) 1956.
6. Cecil, Russel L., and Loeb, Robert F.: A Textbook of Medicine. Philadelphia: W. B. Saunders Co., 1955.
7. Child, Charles G., III: Radical one-stage pancreaticoduodenectomy. Surgery, 23:492, 1948.
8. Coller, Frederick A., et al: Cancer of the colon and rectum. American Cancer Society, 1956.
9. Fraenkel, G. F., et al: Haematemesis in the elderly. J. Am. Geriatrics Soc., 4:415 (May) 1956.
10. Gavey, C. J., et al: Discussion on palliation in cancer. J. Am. Geriatrics Soc., 4:963 (Oct.) 1956.
11. Gitlitz, Israel: Morbidity and mortality in old age. J. Am. Geriatrics Soc., 4:1049 (Nov.) 1956.
12. Hammond, William: Common disorders of the aged. J. Am. Geriatrics Soc., 4:215 (March) 1955.
13. Haude, Raymond W.: Pain and the patient with cancer. Medical Clinics of North America. Philadelphia: W. B. Saunders Co., (May) 1956.
14. Hotchkiss, Robert S.: Prostate obstruction in the aged. J. Am. Geriatrics Soc., 3:1005 (Dec.) 1955.
15. Hudson, Perry B.: Prostate cancer. J.A.M.A., 155:426 (May 29) 1954.
16. Hunter, Oscar B.: The effect of triethylene thiosphoramide on malignant tumors. J. Am. Geriatrics Soc., 4:866 (Sept.) 1956.
17. Joseph, John E.: Carcinoma of the gallbladder, a geriatric surgical problem. Q. Rev. Surg. Obst. & Gynec., 13:4 (March) 1956.
18. Kaufman, J. J., et al: Cancer of the prostate: Diagnosis and treatment. J. Am. Geriatrics Soc., 4:296 (March) 1956.
19. Lewis, Leonard, et al: Dermatoses in the aged. J. Am. Geriatrics Soc., 4:920 (Sept.) 1956.
20. McKeown, Florence: Malignant disease of old age. Brit. J. Cancer., 10:251 (June) 1956.
21. Maingot, Rodney: Abdominal operations. New York: Appleton-Century-Crofts, 1955.
22. Morris, John McLean: Gynecological carcinoma in the older patient. J. Am. Geriatrics Soc., 3:259 (April) 1955.
23. Nagler, J. Herbert: Care of the terminal cancer patient. J. Am. Geriatrics Soc., 4:699 (July) 1956.
24. Pelner, Louis: Host-tumor antagonism. J. Am. Geriatrics Soc., 4:1126 (Nov.) 1956.
25. Ross, C. Howard: Geriatrics and the aging personality. J. Michigan M. Soc., 54:545 (May) 1955.
26. Ross, C. Howard: Geriatric rehabilitation. J. Am. Geriatrics Soc., 5:271 (March) 1957.
27. Slaughter, Danely P., et al: Relief of pain in cancer patients. The Medical Clinics of North America. Philadelphia: W. B. Saunders Co., 1956.
28. Stieglitz, Edward J., et al: Geriatric Medicine. Philadelphia: J. B. Lippincott Co., 1954.
29. Stoloff, Irwin L., et al: Episodic stomach cancer. Ann. Int. Med., 42:1173 (June) 1955.
30. Thewlis, Malford W.: The Care of the Aged. St. Louis: The C. V. Mosby Co., 1954.
31. Thompson, Daniel J., et al: Primary carcinoma of the liver. J. Chron. Dis., 5:205 (Feb.) 1957.
32. Welch, Claude E., et al: Carcinoma of the rectum in a centenarian. New England J. Med., 250:1041 (June 17) 1954.

715 N. University Avenue
Ann Arbor, Michigan

CARCINOMAS OF THE THYROID

(Continued from Page 535)

methods and an inadequate follow-up. Most of the data have been based on five-year periods of observation which are of limited value in such slow-growing tumors as papillary carcinoma of the thyroid. No comparable series of cases treated in the same manner have yet been followed long enough to determine the best method of therapy. Until twenty-year follow-up reports become available, the controversies concerning therapy for thyroid carcinoma will continue.

Acknowledgments

We wish to thank Doctor W. H. Ferguson and Doctor E. A. Gould for the two illustrative cases.

References

1. Crile, G., Jr.: Personal communication.
2. Frazell, E. L., and Foote, F. W.: The natural history of thyroid cancer. A review of 301 cases. J. Clin. Endocrinol., 9:1023-1030, 1949.
3. Frazell, E. L., and Foote, F. W.: Papillary thyroid carcinoma: Pathological findings in cases with and without clinical evidence of cervical node involvement. Cancer, 8:1164-1166, 1955.
4. Graham, A.: The malignant thyroid. Proc. Interstate Post-Grad. M. Assem. No. Am. (1927), 3:264-269, 1928.
5. Hazard, J. B., Crile, G., Jr., and Demsey, W. S.: Nonencapsulated sclerosing tumors of the thyroid. J. Clin. Endocrinol., 9:1216-1231, 1949.
6. Klinck, G. H., and Winship, T.: Occult sclerosing carcinoma of the thyroid. Cancer, 8:701-706, 1955.
7. Lahey, F. H.: Panel discussion. Adenomatous goiter. Trans. Am. Goiter A., 1953, pp. 219-234.
8. McClintock, J. C.: Personal communication.
9. Winship, T.: Panel discussion. The diagnosis and treatment of nodular goiter and thyroid cancer. M. Ann. District of Columbia, 25:534-546, 1956.
10. Winship, T.: Carcinoma of the thyroid in childhood. Pediatrics, 18:459-466, 1956.
11. Wozencraft, P., and Foote, F. W.: Occult carcinomas of the thyroid. Trans. Am. Goiter A., 1948, pp. 150-158.
12. Zimmerman, L. M., and Wagner, D. H.: Carcinoma of the thyroid gland: Its incidence and relation to nodular goiter. Trans. Am. Goiter A., 1953, pp. 287-294.

The Principles and Evaluation of Curative Cancer Therapy

By Chandler Smith, M.D.
Saginaw, Michigan

THE FUNDAMENTAL premise of the evaluation of cancer therapy is that the rate of survival expresses the accomplishment of the method of treatment. The corollary to this premise is that a comparison of survival rates will reveal the superior method of therapy. However, different methods are attended by both favorable and unfavorable results. Comparison of the favorable results has failed to reveal the superior method of treatment for common primary cancers. For example, disagreement persists over the best method of treatment for primary cancer of the breast, uterine cervix, and endometrium. Therefore, the evaluation of cancer therapy by a comparison of survival rates has not attained its primary objective. Furthermore, the unfavorable results have occasioned disagreement over the principle of treatment. For example, there is challenge to the idea that early and radical therapy is superior to conservative and delayed treatment.[1,2]

Such views detract from the important understanding that the earliest treatment will provide the best result. It is therefore of importance to examine critically the basic premise of the current method of cancer evaluation. If that premise is shown to be invalid, a way may be found to explain the unfavorable rates of survival without challenge to the principle of treatment, and to discover a reliable way to identify the superior method of therapy for primary malignant disease. The purpose here is to examine that basic premise and to apply the understanding thus gained to the questions of unfavorable results and superior methods.

Principle of Treatment

Cancer arises at a focal midus after which the tumor cells spread in a peripheral direction from the site of origin. After the onset, it is not possible to predict the distribution of tumor cells accurately from clinical examination of the patient. For example, the palpable features of a mass in the breast do not reveal whether tumor cells have reached the axilla, the mediastinum, or more distant sites. The classification of cancer of the uterine cervix according to clinical stages further illustrates this difficulty. A tabulation of five series of cases, all judged clinically to be stage I, revealed an incidence of tumor cells in pelvic lymph nodes that varied from 2.5 per cent in one series to 34.2 per cent in another series.[3] Regardless of this difficulty, however, the cure of cancer depends on the eradication of all tumor cells. The principle of curative cancer therapy may thus be formulated from three premises: (1) tumor cells move away from the site of origin, (2) the distribution of tumor cells cannot be accurately foretold, and (3) the cure of cancer depends on the eradication of all tumor. The principle of treatment is therefore the eradication of all tumor from the largest amount of tissue at the earliest moment with the least risk.

Evaluation of Treatment

Survival after cancer therapy is determined by two factors. The first is the amount of tissue cleared of tumor by the method of treatment, and the second is the distribution of tumor cells at the time of treatment. If all tumor cells lie within the tissue cleared of tumor, cure is assured. If not, failure is certain. Therefore, survival is determined, not by the method of treatment, but by the relationship of tumor cell distribution to the tissue cleared of tumor by that method. The factors that determine survival rate after cancer therapy are given in the formula:

$$\frac{\text{Tissue Cleared of Tumor}}{\text{Tumor Cell Distribution}} = \text{Rate of Survival}$$

The ratio declares that the greater the proportion of patients in whom the tumor cells are circumscribed about the primary site, and the larger the amount of tissue cleared of tumor by the method of treatment, the higher the rate of survival. The rate of survival thus expresses the

From St. Luke's Hospital, Saginaw, Michigan.

TABLE I. CARCINOMA OF BREAST:

Range of Results According to Method of Treatment

Method of Treatment	Number of Cases	Five-year Survival
Simple Mastectomy		
1. Deaton and Bradshaw[4]	30	63.3%
2. Nohrman[5]	43	58.1%
3. Lockhart and Ackerman[6]	13	38.4%
4. Byrd and Conerly[7]	61	32.7%
5. Orr[8]	44	18.1%
Radical Mastectomy		
1. Clifton and Young[9]	322	54.9%
2. Bell[10]	203	53.6%
3. Haagensen and Stout[11]	495	48.7%
4. Lampe[12]	742	40.2%
5. Orr[8]	195	37.9%

TABLE II. STAGE I CARCINOMA OF CERVIX:

Range of Results According to Method of Treatment

Method of Treatment	Number of Cases	Five-year Survival
Radiotherapy		
1. McKelvey et al[13]	180	91.1%
2. Costolow and Nolan[14]	186	73.1%
3. Truelsen[15]	166	59.8%
4. Munnell and Brunschwig[16]	200	53.0%
5. Hahn[17]	53	52.8%
Surgical Therapy		
1. Morton[18]	27	92.6%
2. Pratt[19]	72	84.7%
3. Brunschwig[20]	57	82.0%
4. Liu and Meigs[21]	93	73.1%
5. Read[22]	34	41.0%

TABLE III. CARCINOMA OF ENDOMETRIUM:

Range of Results According to Method of Treatment

Method of Treatment	Number of Cases	Five-year Survival
Combined Therapy		
1. Payne[23]	28	92.9%
2. Hundley and Associates[24]	32	84.4%
3. Arneson[25]	60	70.0%
4. Taylor and Becker[26]	31	64.5%
5. Scheffey and Associates[27]	38	46.0%
Primary Hysterectomy		
1. Marshall[28]	31	90.0%
2. Payne[23]	46	80.4%
3. Arneson[25]	43	67.7%
4. Ward[29]	27	63.0%
5. Speert and Peightal[30]	93	48.4%

ratio of two factors without measuring either. However, each factor independently exerts an effect on the result. For example, a method that clears tumor from a small amount of tissue will be attended by a high rate of survival if the tumor cells in most of the cases are sharply circumscribed about the primary site. Conversely, a method that clears tumor from a large amount of tissue will be attended by a low rate of survival if the tumor cells in most of the cases are widely dispersed from the primary site. Therefore, the rate of survival may be high or low regardless of the accomplishment of the method. For this reason, the fundamental premise of the evaluation of cancer therapy is not valid.

The corollary to this premise may now be examined. Can a comparison of survival rates be expected to reveal the superior method of treatment? This depends on the relative effect of each factor on the result. The effect of the denominator of the ratio (tumor cell distribution) may be estimated in the following way. When different series of cases of the same type are treated by the same method, the amount of tissue cleared of tumor is almost constant and the numerator of the ratio is a fixed and nearly uniform value. The rate of survival for each series depends on the proportion of cases in which all tumor cells lay within that uniform amount of tissue. That proportion is determined by the unpredictable distribution of tumor cells. Therefore, the effect of the variable of tumor cell distribution on the rate of survival is revealed by the range of results that accompanies different series of cases of the same type that are treated by the same method.

The rates of survival according to the method of treatment for cancer of the breast, uterine cervix, and endometrium are cited in Tables I, II, and III. From these wide ranges of results it is apparent that the variable of tumor cell distribution bears a pronounced effect on the rate of survival.

The effect of the numerator (tissue cleared of tumor) on the result may now be considered. The tissue cleared of tumor is the accomplishment of the method since tumor within that tissue cannot recur within the patient. Different methods of treatment clear tumor from different amounts of tissue. Since the accomplishment of different



Fig. 1. Relationship of tumor cell distribution to difference in accomplishment of conservative and radical methods.

methods is uniform except for the additional tissue cleared of tumor by one, only that difference is of consequence.

The question is: *What effect does that difference bear on the rates of survival?* As illustrated in Figure 1, only three tumor cell distributions are possible with respect to the accomplishment of a conservative and a radical method of treat-

ment. In the first, all tumor cells lie within the tissue encompassed by the conservative method. In this event, both methods are successful regardless of the difference between them. In the second, some tumor cells lie outside the tissue encompassed by the radical method. In this event, neither method is successful regardless of the difference in their accomplishments. Both of these tumor cell distributions are common, and therefore, the difference in the accomplishment of the methods bears not the slightest effect on the rates of survival in most of the cases. That difference is reflected in the rate of survival only when some tumor cells lie outside the tissue encompassed by the conservative method while all tumor cells lie inside the tissue encompassed by the radical method. In this event alone is the patient curable by one method and not by the other. This precise distribution of tumor cells may be expected at the time of treatment in only a small number of cases.

Therefore, the constant difference in the accomplishment of the methods bears only an occasional effect on the rates of survival. It is thus apparent that the numerator of the ratio bears a slight effect, and the denominator a pronounced effect on each rate of survival. The denominator is a wide-range variable. Therefore, the within-group variation for each series is so much greater than the between-group difference that compilation of enough cases to demonstrate that difference becomes an impractical endeavor. For this reason, a comparison of survival rates cannot be expected to reveal the superior of comparable methods of treatment.

A favorable rate of survival cannot be attributed to the accomplishment of the method in disregard for the variable of tumor cell distribution any more than a statistical result can be attributed to the least reliable of the factors that enter a computation. A low rate of survival does not indicate an inferior method of treatment any more than a high rate necessarily indicates that the method is superior. Both results depend primarily on the distribution of tumor cells, and both errors are precluded by discipline in the interpretation of survival rates. For example, a survival rate of 70 per cent means that all tumor cells lay within the tissue cleared of tumor by that method in 70 per cent of those cases. It does not disclose the amount of tissue cleared of tumor and it does not mean that all tumor cells will lie within that same amount of tissue in any other series of cases. The rate of survival thus indicates, not the accomplishment of the method, but the proportion of the total cases in which all tumor cells lay within the tissue cleared of tumor by that method. A favorable rate of survival after a method of therapy that digresses from the principle of treatment is due to a fortuitously circumscribed distribution of tumor cells in a high proportion of the cases rather than to a superior accomplishment of the method.

An unfavorable rate of survival after a method that complies with the principle of treatment is due to an adverse distribution of tumor cells at the time of therapy rather than to an inadequacy of the method. When the method of therapy complies with the principle of treatment, the best possible result is achieved. Therefore, compliance of the method with the principle of treatment is a more reliable criterion of superiority than is a comparison of survival rates.

Application of the Principle of Treatment

These considerations pertain to the treatment of common primary cancers. Carcinoma of the breast may be treated by simple or by radical mastectomy. The latter clears tumor from more tissue than the former. The difference in the accomplishment of the methods is the additional tissue cleared of tumor by the radical procedure. That difference is reflected in the rate of survival by only the proportion of cases in which some tumor cells lie outside the tissue excised by the conservative procedure while all tumor cells lie within the tissue encompassed by the radical operation. This precise distribution of tumor cells may be expected to prevail at the moment of treatment in only a small number of cases. Therefore, the difference in the accomplishment of the two methods bears a negligible effect on the rate of survival. Since each rate is dominated by the variable of tumor cell distribution, a comparison of those rates cannot be expected to reveal the superiority of the radical method. Nevertheless, that difference is of surpassing importance to the occasional patient. Therefore, radical mastectomy is the preferred treatment for cancer of the breast so long as the patient can withstand the operation safely, and the surgeon can perform the procedure skillfully. Superiority of the radical method is attested by the reports of patients who have regained prolonged health after the surgical specimen revealed metastatic disease in axillary lymph nodes,

an area outside the tissue cleared of tumor by the conservative method. Such reports are provided by Haagensen and Stout[11] and by others.

Cancer of the uterine cervix may be treated surgically or with radiant energy. When a curative dose of radiant energy is applied and the pelvic organs are subsequently excised, the finding of residual tumor about the periphery of the operative specimen establishes that the surgical method cleared tumor from more tissue than was accomplished by the radiation method. The difference in the accomplishment of the two methods is slight, and the effect of that difference on the rates of survival is too small to be disclosed by a comparison of those rates. For the occasional patient, however, the greater accomplishment of the surgical method determines the difference between success and health, or failure and the ravages of metastatic disease. Under optimal conditions, therefore, surgical therapy is the superior method for the curative treatment of invasive cancer of the cervix. The superiority of the operative method is attested by prolonged survival in patients in whom the surgical specimen disclosed tumor cells in tissue beyond the cancerocidal range of the radiant energy. Such results are reported by Taussig,[31] Meigs,[32] Bonney,[33] Brunschwig,[20] Schlink,[34] and Liu and Meigs.[21]

The principle of treatment decrees that not only the largest amount of tissue should be cleared of tumor, but that the method should be applied at the earliest possible moment. The foregoing examples reveal the need for compliance of the method with the principle of treatment in terms of the amount of tissue cleared of tumor. The factor of time is illustrated by reference to the treatment of endometrial carcinoma which may be treated by undelayed hysterectomy or by intracavitary radium with hysterectomy six to eight weeks later. Each method clears tumor from the same amount of tissue.[35] However, in combined therapy, the operation is delayed. The superiority of immediate hysterectomy is thus the proportion of cases in which extra-uterine metastasis takes place from tumor cells beyond the cancerocidal range of the radium during that period of operative delay. This event is infrequent because endometrial carcinoma is usually a slowly invasive tumor. Therefore, the difference in the accomplishment of the two methods is too slight to be disclosed by statistical means. There is no justification, however, for deferring definitive treatment for a period during which tumor cells may pass beyond the boundary of resectable pelvic tissue. Under optimal conditions, therefore, undelayed hysterectomy is the preferred treatment for cancer of the endometrium.

If the result of treatment improves as the amount of tissue cleared of tumor increases, the best result should attend the most radical method. Although this concept is correct, extrinsic factors limit its application. Super-radical mastectomy for carcinoma of the breast and pelvic exenteration for cervical cancer serve as illustrations. The super-radical operations are superior to the regular radical procedures by the proportion of cases in which some tumor cells lie outside the tissue encompassed by the regular radical method, while all tumor cells lie within the tissue cleared of tumor by the extended radical procedure. A superiority of the super-radical methods may be demonstrated, not by posting the survival rate of all patients so treated, but by achieving prolonged health in patients in whom the surgical specimen discloses tumor outside the tissue ordinarily encompassed by the regular radical procedure. Wide application of the super-radical methods may profitably await the recording of such evidence because the complications of therapy increase as the method becomes more radical.

The method should not be so radical as to jeopardize the recovery of the patient, nor so conservative as to permit recurrence because of failure to excise expendable tissue. Modifications of this objective may be made for the individual case according to the condition of the patient, the skill and experience of the therapist, and the facilities available for treatment. Regardless of the modifications, however, or the results, the therapeutic objective as expressed by the principle of treatment, remains unchanged.

Rate of Survival

Since survival rates are seldom useful in determining the superior method of treatment, of what utility are they? The rate of survival indicates the proportion of cases in which all tumor cells lay within the tissue cleared of tumor by the method of treatment. Therefore, rising rates of survival after the same method of treatment are due to higher proportions of patients who are treated while all tumor cells are circumscribed about the primary site rather than to any substantial im-

provement of the method. For example, Harrington[36] cites five-year survival rates after radical mastectomy between the years 1910 and 1944 that read in sequence, using nearest whole numbers: 40, 41, 40, 48, 54, 60, and 62 per cent. For carcinoma of the uterine cervix, Heyman[37] reports a relative cure rate of 52.4 per cent for stage I cases treated with radiotherapy from 1914 to 1931. That figure rose to 69.3 per cent during the ensuing period from 1932 to 1941. In the state of Connecticut, the Cancer Registry tabulated the results of treatment of 75,494 cases of cancer from 1935 through 1951.[38] Marked increases in the five-year survival rates were observed for patients with cancer of the colon, rectum, uterine cervix, and uterine body.

This encouraging trend may be attributed to the programs of cancer education which emphasize to the public and the profession the importance of early treatment. It is in the demonstration of this progress that public enthusiasm in the programs of early cancer detection may be enlisted and sustained. The public and the medical profession, sharing together the responsibility of early detection, should move forward with understanding and conviction so that the largest number may be provided with the best treatment at the earliest moment. Herein lies the hope for continued improvement in the results of cancer therapy.

Summary

The principle of curative cancer therapy is the eradication of all tumor from the largest amount of tissue at the earliest moment with the least risk. The accomplishment of the method of treatment is the amount of tissue cleared of tumor. The distribution of tumor cells at the time of treatment is unpredictable. The rate of survival is determined by the ratio of tumor cell distribution to the amount of tissue cleared of tumor. The rate of survival is dominated by the unavoidable variable of tumor cell distribution. The constant difference in the accomplishment of comparable methods bears only an occasional effect on the rate of survival. That effect is too slight to be disclosed by a comparison of survival rates so long as the variable of tumor cell distribution is extant.

Compliance of the method with the principle of treatment is the most reliable criterion of therapeutic superiority. The rate of survival indicates the proportion of cases in which all tumor cells lay within the tissue cleared of cancer by the method of treatment. Rising rates of survival after the same method of treatment are due to higher proportions of patients who are treated while all tumor cells are circumscribed about the primary site. Such results are attributable to the programs of early cancer detection. Expansion of those programs and selection of the method of therapy according to compliance with the principle of treatment rather than by a comparison of survival rates will provide the best possible result for the greatest number of patients with malignant disease.

References

1. McKinnon, N. E.: Limitations in diagnosis and treatment of breast and other cancers. Canad. M. A. J., 73:614-625, 1955.
2. Crile, G., Jr.: The present status of surgery in the treatment of cancer. Postgrad. Med., 20:118-124 (Aug.) 1956.
3. Smith, J. C.: The inadequacy of survival rates in the evaluation of cancer therapy. Surg., Gynec. & Obst., 103:307-312, 1956.
4. Deaton, W. R., Jr., and Bradshaw, H. H.: Simple or radical mastectomy? An analysis of cases. South. M. J., 44:142-145, 1951.
5. Nohrman, B. A.: Cancer of the breast; a clinical study of 1,042 cases treated at Radiumhemmet, 1936-1941. Acta radiol., supp. 77:1-98, 1949.
6. Lockhart, C. E., and Ackerman, L. V.: The implications of local excision or simple mastectomy prior to radical mastectomy for carcinoma of the breast. Surgery, 26:577-583, 1949.
7. Byrd, B. F., and Conerly, D. B.: The role of simple mastectomy in the treatment of carcinoma of the breast. Ann. Surg., 141:477-481, 1955.
8. Orr, T. G.: An attempt to evaluate the radical and palliative treatment of breast carcinoma. Surg., Gynec. & Obst., 90:413-422, 1950.
9. Clifton, E. E., and Young, L. E.: Carcinoma of the breast; 5 and 20 year follow-up following radical mastectomy. Ann. J. Surg., 82:185-190, 1952.
10. Bell, H. G.: Cancer of the breast. Ann. Surg., 130:310-317, 1949.
11. Haagensen, C. D., and Stout, A. P.: Carcinoma of the breast. III. Results of treatment, 1935-1942. Ann. Surg., 134:151-172, 1951.
12. Lampe, I.: Cancer of the breast. J. Michigan M. Soc., 54:1200-1203, 1955.
13. McKelvey, J. L., Stenstrom, K. W., and Gillam, J. S.: Results of an experimental therapy of carcinoma of the cervix. Am. J. Obst. & Gynec., 58: 896-907, 1949.
14. Costolow, W. E., and Nolan, J. F.: Factors influencing prognosis in treatment of carcinoma of the cervix uteri. Am. J. Obst. & Gynec., 61:548-556, 1951.
15. Truelsen, F.: Cancer of the Uterine Cervix. Clinical features with particular reference to the results of radiotherapy. A report of 2,918 cases. London: H. K. Lewis and Co. Ltd., 1949.
16. Munnell, E. W., and Brunschwig, A.: Five-year end-results of irradiation therapy of cancer of the cervix uteri at Memorial Hospital. Surg., Gynec. & Obst., 87:343-348, 1948.

(Continued on Page 554)

Patients with Multiple Skin Malignancies

I. Some Remarks on Immunobiology

By Leon Goldman, M.D.
Cincinnati, Ohio

THOSE of you who sit, almost grudgingly, on cancer control councils know about the casual air with which malignancies of the skin are dismissed. The council is anxious to leave a subject of 90-plus per cent cures to discuss the gloomy prognosis of carcinoma of the lung.

There are, however, instances in which malignancies of the skin continue to develop on important areas of the face where they can produce severe disfigurement. These sites are the eyelids, nose, lips, and ears. Furthermore, cancer in an accessible and visible organ such as the skin may be used for investigative studies in the immunobiology of cancer. Two cases are selected from our series to illustrate.

Case Reports

Case 1.—R. McC., hospital orderly, aged thirty-two. Since 1948, he has been developing malignancies of the skin, all basal cell types. Most of the lesions are on the face and neck, next on the arms. At the time of his last examination (September 21, 1957), 120 malignancies were counted including some within scars of previously treated areas. Therapies included surgery, electrosurgery, conventional x-ray therapy, Thorium X, Sr^{90}, liquid nitrogen, carbon dioxide, podophyllin, and dermabrasion. His mother is reported to have died of malignancy of the breast. His father, aged seventy, is reported to have many malignancies of the skin (type?) of recent origin. Disfigurement of the entire face is increasing.

Case 2.—Mrs. T. H., housewife, aged thirty-two. Since 1942, she has been having basal cell malignancies of the skin. At one time, under the care of Dr. Clayton Wheeler, he reported she had had thirty-six lesions. Her therapy included surgery, electrosurgery and plastic surgery, x-ray therapy, psoralens, and sun screens. At the present time, she has small malignancies of the nose and cheeks for which plastic surgery is to be done by Dr. V. E. Siler. There is considerable scarring deformity about the eyes of this patient.

What do we try to do about preventing these locally destructive malignancies in these patients? We have tried protective clothing, sun screens, protective creams, oral psoralens (two years in three patients without any benefit and no apparent dangers in accelerating cancer development), vitamin A, et cetera.

At present, we have fifteen cases of these types of multiple skin malignancies. Most of the lesions are basal type; a few, however, are squamous, both pre-invasive and invasive.

The other patients in our series of multiple and recurrent skin malignancies are post-radiation dermatitis where plastic surgery cannot remove all of the involved skin. In addition, we have the arsenical keratoses group, psoriasis with multiple malignancies, and also, the rare xeroderma pigmentosum case in the child with the development of multiple skin malignancies. The only effective program we have to date is to watch for the early appearance, especially with skin microscopy, and to remove this small spot with a minimum amount of deformity. We believe, that where possible, excisional therapy should be done in preference to cauterization techniques. How do we try to prevent additional malignancies from developing in cases where we cannot correct this terrain readily?

Since our efforts with protective and chemotherapeutic measures to increase the resistance of such patients to the development of their tumors has failed, we look for help in immunology.

This is an old phase of cancer research.[1] However, the confusion of claims and counter-claims led to its abandonment as an important project.

In recent years, there has been renewed and extensive interest in immunology in relationship to tumors. The reason for this has been the advances in the field of immunology. Some of these advances may be considered briefly as the gel diffusion technique developed by Ouchterlony[2] after work by Bechold in 1905. This is a technique for immunologic assay. Other advances have included studies of immunologic properties of serum

Presented at the Annual Session of the Michigan State Medical Society, Grand Rapids, September, 1957.
From the Department of Dermatology of the College of Medicine of the University of Cincinnati.

as regards organ specificity. Many of the recent studies have been done by Witebsky and his group.[3-5] In addition, Björklund[6,7] has been able to neutralize antibodies in hyperimmune serum against normal human plasma. The resultant antiserum contains free antibodies against tumor antigens. Consequently, antibodies can now distinguish not only between different types of bacteria and viruses, but also between normal and even abnormal mammalian cells and viruses. Brandt[8], in our department, did pioneer work on organ specificity of brain tissue and studied the lipid nature of this antigen. Brandt[8] now directs the serological studies in our work with skin cancer. Freund[9,10] found that antibody formation can be enhanced and sustained when the antigen is injected in a water-in-paraffin oil emulsion with killed mycobacteria. This extra stimulant is called the Freund Adjuvant and became an important part of modern cancer immunology.

All these developments combined with the great advances in tissue culture techinques have enhanced investigative and popular clinical research in so-called cancer immunity.

Does clinical evidence indicate that there may be, at least, at times some immune mechanisms active in human cancer? According to Graham,[11,12] these may be listed briefly as: (1) inflammatory response about tumors, (2) some tumors such as gastric carcinomas show peripheral necrosis, (3) activity of lymphoid tissue in regional nodes in response to local metastatic foci, (4) concept of latent or arrested carcinoma (desensitization of host — Berdel[13], (5) occasional spontaneous regression with acute infection, (6) the local histiocytic response in tumors, (7) finally, the actual evidence of the development of antibodies in patients elicited by their own tumors.

Many experiments have been done on the immunologic mechanisms of animals subjected to inoculation by various tumors and tumor extracts. Also as indirect evidence recently have been the experimental vaccines of virus lymphomatosis in chickens by Burmeister[14] and the development by Friend[15] of a vaccine for the virus causing leukemia in mice.

All this naturally has lead to some initial studies on human cancer. The cancer implantation series at Memorial in New York and at the Ohio Penitentiary are well known.[16,17] The resistance or lack of resistance to human inoculation with tumors has been related by Southam and his collaborators[16,17] to the blood properidin level. Another interesting feature of the cancer implantation experiments in man is the more rapid rejection of the second implant by the volunteer. This may indicate an immunity acquired and superimposed on a natural immunity. The group at Memorial further concludes that the cancer cells used in the implant experiments may contain antigens not found in normal human cells. Witebsky[5] and his associates in experiments in rabbits showed antigenic differences between extracts of normal thyroid and thyroid malignancies. It is important to emphasize that a cancer transplant is not the same as spontaneous cancer.

Stone and Schnaufer[18] have used implantations of sterile frozen cancer tissue in an effort to induce resistance. Perhaps the most extensive and careful recent studies in the treatment of cancer patients with vaccine have been done by Graham[11,12] and his staff. He has treated recently eighty to 100 patients. His work and advice and suggestions have been followed by us. As Witebsky[5] indicates, most of the work in man has been with more or less terminal cases: "If one could summon the courage to treat patients at an earlier stage, the results might possibly be different."

In 1935, at the suggestion of Lee Foshay, we took blood serum from a patient with multiple superficial malignancies of the skin who showed areas of spontaneous healing.[19] We used this serum locally and systemically in patients with basal cell malignancies without any result. In an effort to study the immune mechanism of this "donor" patient, we tested her to various forms of radiations, tars, arsenic (which she had taken at one time), and even methylcholanthrene. No evidence of cutaneous hypersensitivity could be demonstrated on her uninvolved skin.

We decided to start our investigative studies in cancer immunity with experiments in the group of multiple basal cell malignancies. We have seen that there is no practical prevention program available for this patient. Perhaps, the choice of a basal cell tumor as a so-called cancer antigen is unwise, for basal cell malignancies rarely metastasize and may have different immunologic mechanisms. Moreover, this lesion may not be even a malignancy. Lever[20] considers them as hamartomas. Greene[21] has never succeeded in growing basal cell tumor in the rabbit eye.

However, the study in the multiple basal cell group would serve to introduce us to the subject of skin cancer immunology in that it would give us opportunity to study the local reactions of the antigen, especially the influence of the adjuvant. The serologic control studies could also be done here. The present series, then, includes twelve patients with multiple basal malignancies; one with multiple squamous cell tumors.

The tissue is removed under sterile precautions—one portion is sent for confirmatory biopsy. The other portion is put into a sterile container and kept in deep freeze until ready for preparation. An effort is made to get as much tumor and as little other structures such a subcutaneous tissue. Efforts to check the fresh tissue under the stereobionocular microscope in order to dissect away excess tissue has made for bacterial and mold contamination. The theoretical reason for avoiding other tissues is that we do not wish to induce antibodies against epidermis, vascular structures, et cetera. Graham[12] has indicated that a "number of patients have shown a striking eosinophilia" following the use of the cancer vaccine. He has had no serious complications.

Under sterile precautions, the frozen bit of tissue is ground in a small sterile glass grinder. We are studying the resultant tissue mass after grinding with methylene blue, Janus green and acridine orange to determine preservation of nuclei after grinding. Because of the small size of tissue, we prefer this glass grinder to a metal tissue grinder. Saline is added to this ground mass, then, our modified Freund adjuvant (eight parts of a paraffin base, Bayol F, to one part of a wetting agent, Arlacel).[22] We have omitted the Mycobacterium butyricum at present. The creamy mixture is checked for sterility and then used for injection. One tenth to 0.2 cc. is injected intradermally in the skin of the patient from whom the material was obtained. The time interval and dosage still remain to be determined. Most of the patients have had 0.1 to 0.2 cc. once a week for varying periods. The serological control of these patients is to be done by Brandt.[8] No program of this type, even with investigative studies, should ever be done without adequate serologic controls.

Our study has been in progress for only six months. This has given us opportunity chiefly to observe the development and progress of the local injection of the so-called tumor antigen with the modified Freund adjuvant. Small nodules persist for months. No large abscesses have developed. We have observed two instances of focal reactions in previous injection sites. We have not used intramuscular injections. In one patient, we used ultratumoral injections. Graham[12] has observed some ulceration of the skin from intradermal use of his cancer vaccine. A progressive histologic study of these instances shows a perivascular reaction and edema suggestive of a tuberculin-type response. Tissue eosinophilia is found in some sections. So far, of course, there has been no demonstrable effect on the active malignancies in any of these patients. There is no clinical evidence that there has been any activation of any of the lesions of these patients.

Conclusions

Observation of patients with multiple skin malignancies have offered nothing of practical value to increase their resistance to the development of new tumors.

Recent developments in immunology provide interesting technics for work with cancer. Many studies on immunity in human cancer have been started actually in man. Our own preliminary research has been with the patient with multiple and disfiguring skin malignancies. There have been no marked reactions to injections of skin tumor material in modified Freund adjuvant. Other than this, no conclusions can be drawn from our preliminary studies. Investigative studies of cancer vaccine should be done only in research centers where proper serologic and other critical investigative procedures can be done. At present, from a clinical aspect, the only effective therapy of these patients with multiple skin malignancies is the constant observation of the patient for the early detection and prompt and adequate removal of the lesion.

References

1. Hauschka, T.: Immunologic aspects of cancer. A Review. Cancer Res., 12:615, 1952.
2. Ouchterlony, Orjan: Diffusion-in-gel methods for immunologic analysis. Exhibit XI International Congress of Dermatology, Stockholm, 1957.
3. Witebsky, Ernest, Rose, Noel R., and Shulman, Sidney: Studies in organ specificity. J. Immunol., 75:269 (Oct.) 1955.
4. Witebsky, Ernest, Rose, Noel R.: Studies on organ specificity. J. Immunol., 76:408 (June) 1956.
5. Witebsky, Ernest, Rose Noel R., and Shulman, Sidney: Studies of normal and malignant tissue antigens. Cancer Res., 16:831 (Oct.) 1956.
6. Björklund, Bertel B., Graham, John A., and Graham, Ruth: Effect of horse anti-human cancer serum on malignant and non-malignant cells. Internat. Arch. Allergy, 10:56, 1957.

7. Björklund, Bertel, and Björklund, Viveka: Antigenicity of pooled human malignant and normal tissues by cyto-immunologic technic. Presence of an insoluble heat labile tumor antigen. Internat. Arch. Allergy, 10:153, 1957.
8. Brandt, R., Guth, H., and Miller, R.: Zur frage der organspezifitat von lipoid antikorper. Klin. Wchnschr., 8:655, 1926.
9. Freund, Jules: The mode of action of immunologic adjuvants. New York: S. Karger Basel. Adv. Tuberc. Rev., 7:130-148, 1956.
10. Freund, Jules: Personal communication to the author.
11. Graham, John B., and Staff: The treatment of cancer patients with vaccine. Summary Review of John B. Graham, Roswell Park Memorial Institute (Nov. 9) 1956.
12. Graham, John B.: Personal communication to the author.
13. Berdel, W., Mass, G., und Wiedemann, G.: Der mechanismus der tumor allergie und seine Bedentung fur die tumor pathogenese. Internat. Arch. Allergy, 9:200, 1956.
14. Burmeister, B. R.: Symposium on Fundamental Cancer Research, M. D. Anderson Hospital and Tumor Institute, University of Texas, Houston (March 8) 1957.
15. Friend, Charlotte: A cancer vaccine. GP, 15:34, 1957.
16. Personalities in the medical news—Chester M. Southam: A cancer immunity clue. GP, 15:34 (June) 1957.
17. Southam, Chester M., Moore, A. E., and Rhoads, C. P.: Studies on transplantation of cancer cells—Summary. Medical Science, 2:24 (Aug. 25) 1957.
18. Stone, H. B., and Schnauffer, L.: Attempts to induce resistance to cancer. Ann. Surg., 142:329, 1955.
19. Tauber, Elmore B., and Goldman, Leon: Multiple superficial epithelioma. Brit. J. Derm., 67:21 (Jan.) 1935.
20. Lever, Walter F.: Histopathology of the skin. P. 321. Philadelphia: J. B. Lippincott Company, 1949.
21. Greene, Harry: Personal communication to the author.
22. Salk, J. E., et al.: Use of adjuvants in studies on influenza immunization. J.A.M.A., 151:1169, 1953.

441 Vine St.
Cincinnati 2, Ohio

CURATIVE CANCER THERAPY

(Continued from Page 550)

17. Hahn, G. A.: Carcinoma of the cervix uteri treated at the Oncologic Hospital, 1929 to 1949. Am. J. Obst. & Gynec., 69:48-58, 1955.
18. Morton, D. G.: The surgical treatment of cervical carcinoma. Wertheim operation; pelvic lymphadenectomy. Am. J. Roentgenol., 57:685-690, 1947.
19. Pratt, J. H.: A study of Wertheim hysterectomies for squamous epithelioma of the cervix at the Mayo Clinic from 1930 through 1950. M. Clin. N. Am., 31:1063-1077, 1951.
20. Brunschwig, A.: The surgical treatment of cancer of the cervix. Cancer, 6:980-986, 1953.
21. Liu, W., and Meigs, J. V.: Radical hysterectomy and pelvic lymphadenectomy. A review of 473 cases involving 244 for primary invasive carcinoma of the cervix. Am. J. Obst. & Gynec., 69:1-32, 1955 (Jan.).
22. Read, C. D.: The role of surgery in the treatment of carcinoma of the cervix. Am. J. Obst. & Gynec., 56:1021-1029, 1948.
23. Payne, F. L.: The role of radiation and of surgery in the management of uterine carcinoma. Surg., Gynec. & Obst., 94:715-721, 1952.
24. Hundley, J. M., Diggs, E. S., and Kardash, T.: Adenocarcinoma of the uterus. Am. J. Obst. & Gynec., 57:52-68, 1949.
25. Arneson, A. N.: An evaluation of the use of radiation in the treatment of endometrial carcinoma. Bull. New York Acad. Med., 29:395-410, 1953.
26. Taylor, H. D., Jr., and Becker, W. F.: Carcinoma of the corpus uteri, end results of treatment in 531 cases from 1926-1940. Surg., Gynec. & Obst., 84:129-139, 1947.
27. Scheffey, L. C., Thudium, W. J., Farell, D. M., and Hahn, G. A.: Controversial factors in the management of fundal carcinoma. Am. J. Obst. & Gynec., 52:529-540, 1946.
28. Marshall, S. B.: Endometrial carcinoma; a study of 214 cases from the Hartford Hospital. Connecticut M. J., 15:187-195, 1951.
29. Ward, G. G.: The diagnosis and treatment of carcinoma of the corpus uteri based on experiences at Woman's Hospital. Am. J. Obst. & Gynec., 44: 303-309, 1942.
30. Speert, H., and Peightal, T. C.: An evaluation of adjunctive radio-therapy in surgical treatment of endometrial carcinoma. Am. J. Obst. & Gynec., 84-129-139, 1947.
31. Taussig, F. J.: Iliac lymphadenopathy for group II cancer of the cervix. Technique and five-year results in 175 cases. Am. J. Obst. & Gynec., 45: 733-748, 1943.
32. Meigs, J. V.: Radical hysterectomy with bilateral pelvic lymph node dissections. A report of 100 patients operated on Five or more years ago. Am. J. Obst. & Gynec., 62:854-870, 1951.
33. Bonney, V.: Wertheim's operation in retrospect. Lancet, 256:637, 1949.
34. Schlink, H. H.: Cancer of the uterus: The Wertheim operation. M. J. Australia, 1:503-508, 1953.
35. Smith, J. C.: Superiority of surgical treatment of endometrial carcinoma. J.A.M.A., 160:1460-1464, 1956.
36. Harrington, S. W.: Results of surgical treatment of unilateral carcinoma of the breast in women. J.A.M.A., 148:1007-1011, 1952.
37. Heyman, J.: Improvement of results in the treatment of uterine cancer. J.A.M.A., 135:412-416, 1947.
38. Griswold, M. H., Cutler, S. J., and Eisenberg, H.: Improvements in cancer survival rates. New Eng. J. Med. 254:1062-1068 (June 7) 1956.

A NEW, CORTICOSTEROID MOLECULE WITH GREATER ANTIALLERGIC, ANTIRHEUMATIC AND ANTI-INFLAMMATORY ACTIVITY



for your patients with

- BRONCHIAL ASTHMA, ALLERGIC DISORDERS
- ARTHRITIC DISORDERS
- DERMATOSES

Squibb Triamcinolone

KENACORT

- far less gastrointestinal distress
- safe to use in asthma with associated cardiac disease; no sodium and water retention
- does not produce secondary hypertension—low salt diet not necessary
- no unnatural psychic stimulation
- often works when other glucocorticoids have failed
- and on a lower daily dosage range

SQUIBB

Initial dosage: 8 to 20 mg. daily. After 2 to 7 days gradually reduce to maintenance levels.
See package insert for specific dosages and precautions.
1 mg. tablets, bottles of 50 and 500.
4 mg. tablets, bottles of 30 and 100.

Squibb Quality—the Priceless Ingredient

"KENACORT" IS A SQUIBB TRADEMARK

metaphosphate produced markedly higher blood levels than capsules containing either the corresponding base or the hydrochloride alone. In addition, the average levels derived from the tetracycline base or the chlortetracycline base were higher than those produced by the corresponding hydrochloride though lower than those resulting from the mixture containing the base and sodium metaphosphate. In the study with chlortetracycline[6] capsules containing a mixture of the hydrochloride and sodium metaphosphate were also included in the crossover, and the average levels produced by these capsules were the same as with the mixture of chlortetracycline base with sodium metaphosphate.

Although the enhancement of blood levels of tetracycline by phosphate, either complexed to the tetracycline or mixed with the base or the hydrochloride, thus seemed fairly well established, some doubts still remained because certain reliable observers (including many whose results have not been published) failed to confirm the findings with the materials and methods they used. Further confusion seemed to be added by a subsequent report of Welch et al.,[7] who, in repeating a crossover study with capsules of tetracycline phosphate complex and tetracycline hydrochloride with and without sodium metaphosphate, found [illegible]

"...Tetracycline hydrochloride and citric acid, in an encapsulated mixture, produced higher serum concentrations and greater urinary excretions, and hence better absorption of tetracycline, than any other preparation studied..."

[illegible] were published simultaneously with the last mentioned report of Welch et al.[7] These data were based on thoroughly controlled studies both in rats[8] and in man[9] and include additional findings that serve to explain, fairly conclusively, the various discrepancies that have been mentioned.

The experiments in rats[8] were carried out to study the effects of citric acid, dicalcium phosphate, sodium metaphosphate, food, oil and sorbitol on the serum antibacterial activity produced by the administration of tetracycline hydrochloride or tetracycline base. Citric acid administered in equal weight with tetracycline hydrochloride gave the highest concentrations of all the preparations studied. No enhancing effect was obtained from citric acid when given with tetracycline base. Dicalcium phosphate and food resulted in lower, and sodium metaphosphate in higher, serum antibacterial activity than was observed in their absence. Oil and sorbitol did not interfere with tetracycline absorption.

Dicalcium phosphate is widely used as a filler in various capsules, including those of the tetracyclines. The authors cite a large number of other studies that implicate the presence of calcium ions as the cause of the reduced absorption of tetracyclines and show that citric acid can partially neutralize this effect. The depressing effect of food on the serum levels of tetracycline is likewise explained by the goodly amount of minerals contained in commercial laboratory diets, and they postulate that the multivalent cations may be responsible for the poorer absorption of the drug. The authors could not explain the failure of citric acid to enhance serum concentrations when administered with tetracycline base in contrast to its marked effect when given as the hydrochloride. However, they hypothesized that the ability of citric acid to enhance serum levels of tetracycline is related to its ability to form complexes [illegible]

[illegible] last mentioned paper of [illegible] et al.[7] indicates that in their study the capsules [illegible] tetracycline hydrochloride, chlortetracycline hydrochloride and tetracycline phosphate complex all contained dicalcium phosphate as a filler, whereas the capsules containing citric acid and sodium hexametaphosphate did not contain any dicalcium phosphate. This could clearly explain the discrepancies noted in that study. Likewise, the inconsistencies in other studies may very well have been due to the presence of calcium as fillers in some of the capsules and not in others.

This, however, fails to explain the most recent findings of Welch and Wright,[10] who compared the absorption of three capsules, each containing 250 mg. of oxytetracycline hydrochloride — one without any adjuvant, one with 250 mg. of citric acid and the third with 380 mg. of sodium hexametaphosphate; no other filler was contained in any of these capsules. In triple

crossover studies, they as
lected one, three and six
found that sodium hexa
average serum concent
three hours, whereas
average levels of oxyte
tested.

R

1. Eisner, H. J., Stirn, F.
Enhancement of serum le
J. Pharmacol. Exper. &
2. Kaplan, M. A., Dickison,
F. H. New, rapidly absor
biotic Med. & Clin. Therap.
3. Welch, H., Lewis, C. N., St
concentrations of three tet
single oral dose in man.
222, 1957.
4. Pulaski, E. J., and Isokan
blood serum, bile, and pr
ministration of tetracycline
drochloride. *Antibiotic Me*
5. Welch, H., Wright, W.
blood concentrations follo
hydrochloride, tetracycline
metaphosphate. *Antibio*
6. Welch, H., Wright, W.
following oral admi
chlortetracycline b
Antibiotic Med. &
7. Welch, H., Wri
blood concentr
and chlortetra
Therap. 4:62
8. Dearborn,
J. J., and
sorption
4:627-64
9. Sweene
J. M.
certai
1957.
10. Welch
hexam
tered
4:735.

TOBA

LIKE
monary-
moves ar
confused
cates who
countering of
vations about th
contrived aggressio
medical credentials. t
reasons have become
"wealth of scientific
of chain smokers at
and reiterate that wher
no one has yet proved th
cause of cancer. Not con
position like that of those
without denying the "evi
interests have shown the
sive. Now, they have
including that of one
Tobacco and Health,
Looks at Smoking, di

Editorial.
The New England Journal of Medicine.
258:97-99, (January 9) 1958

ACHROMYCIN*V

TETRACYCLINE HCl BUFFERED WITH CITRIC ACID

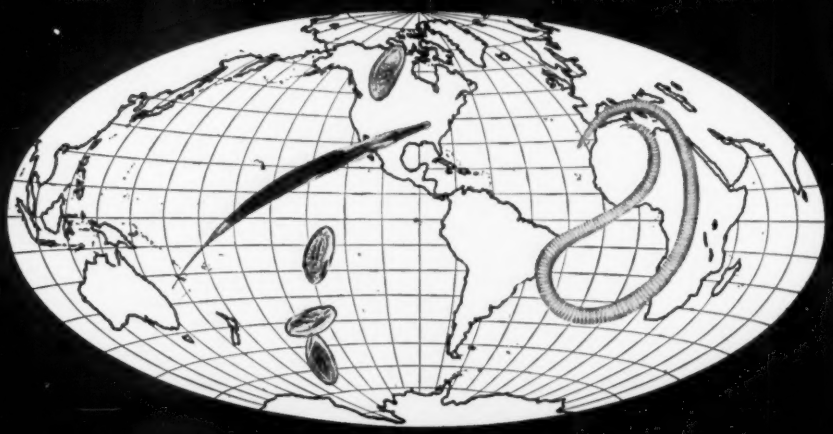
is

tetracycline and citric acid

Lederle

LEDERLE LABORATORIES DIVISION, AMERICAN CYANAMID COMPANY, PEARL RIVER, NEW YORK
*Reg. U. S. Pat. Off.

for "This Wormy World"



Pleasant tasting

'ANTEPAR'® brand

PIPERAZINE

SYRUP · TABLETS · WAFERS

Eliminate **PINWORMS IN ONE WEEK**
ROUNDWORMS IN ONE OR TWO DAYS

PALATABLE · DEPENDABLE · ECONOMICAL

'ANTEPAR' SYRUP – Piperazine Citrate, 100 mg. per cc.
'ANTEPAR' TABLETS – Piperazine Citrate, 250 or 500 mg., scored
NEW 'ANTEPAR' WAFERS – Piperazine Phosphate, 500 mg.

Literature available on request

BURROUGHS WELLCOME & CO. (U.S.A.) INC., Tuckahoe, N. Y.

Lymphosarcoma of the Gastrointestinal Tract

Report of Two Cases

By John W. Strayer, M.D., F.A.C.S.
Niles, Michigan

ALTHOUGH lymphosarcoma of the gastrointestinal tract is relatively uncommon, it appears often enough to warrant a review of some of the important aspects of the disease. Lymphosarcoma involving this part of the anatomy can produce symptoms which are identical to those of other tumors, both benign and malignant, of the gastro-intestinal tract and, because of the extreme radio-sensitivity of the tumors, it is important to differentiate between lymphosarcoma and adenocarcinoma, which of course is much more common to this system of the body. The literature is surprisingly devoid of extensive refferences regarding this particular disease and, because of recent experience with two cases, one of lymphosarcoma of the stomach and one involving the small bowel, it was felt that a comprehensive review would be of some interest.

Report of Cases

Case 1.—This white man, aged seventy-nine, was first seen in October, 1955, complaining of some difficulty swallowing. His appetite had been fairly good, and physical examination at that time was not remarkable. He was urged to have gastrointestinal x-rays taken, but being of a determined nature, he refused. He was not seen again until June, 1956, at which time he complained of weight loss and weakness which had been rather marked for the past three months. The weight-loss amounted to 20 pounds. This was associated with some nausea and dizziness; there was no vomiting. The past history was non-contributory.

Physical examination at that time revealed an elderly, white male appearing chronically ill. He was of the asthenic type. The heart and lungs were not remarkable. The abdominal examination revealed no masses. The red blood count was 4,800,000, white count 6,300, hemoglobin 93 per cent, 14 grams. The differential was normal. The urinalysis was negative. The chest x-ray showed several old healed rib fractures and some emphysema, otherwise it was negative. Upper gastrointestinal x-rays were taken and revealed a large filling defect in the cardia of the stomach. The radiologist felt that this was a large carcinoma. On June 8, 1956, the patient underwent an abdominal laparotomy, at which time a large, rather bulky lesion was found involving the major portion of the cardia of the stomach but not extending into the esophagus. There were numerous pre-aortic nodes and the spleen was studded throughout. The nodes extended up and down the aorta. The liver was not remarkable. Grossly, this was felt to represent a lymphosarcoma and it was felt, at the operating table, that an attempt should be made to remove the primary lesion. This was done with the removal of the upper half of the stomach, doing an esophagogastrostomy but making no attempt to resect the multitude of surrounding lymph nodes and spleen.

The patient's postoperative course was fairly good. There was some infection of the wound but it healed very well and, except for some mental depression coupled with uncooperation, the patient got along fairly well and was discharged from the hospital on his twentieth postoperative day.

He returned home and began eating fairly well. He was seen again in the office two weeks after discharge and urged to have postoperative radiation. This was carried out and completed in September, 1956.

He became much stronger and felt very well until November of 1956, at which time a large mass appeared in the left axilla. This was also irradiated and disappeared completely. Approximately a month later another mass appeared in his left superclavicular area. The patient refused further irradiation. He gradually developed more gastrointestinal symptoms. He also developed innumerable large and small subcutaneous nodules which were obviously neoplastic, went downhill very fast and died on December 31, 1956. Autopsy permission was not obtained.

Case 2.—This man, white, aged forty-one, was seen in June, 1956, with right lower quadrant pain—of rather sudden onset, associated with nausea and vomiting, but his bowels moved normally. The pain became progressively worse and he was admitted to the hospital with a suspected acute appendicitis.

Physical examination, at that time, revealed a slightly elevated blood pressure. There was a marked divergent strabismus. The heart showed some enlargement associated with the definite pre-systolic murmur and slight thrill. The abdomen showed some moderate distention with increased bowel sounds, but no masses were felt.

Laboratory findings showed a red blood cell count of 5,680,000, white blood cells 8,300, hemoglobin 106 per cent, 15.9 grams. The differential was normal. Examination of the urine showed no abnormalities. The blood carbon dioxide was 54 milligrams-per cent, the chlorides

Presented before the Michigan Chapter of the American College of Surgeons, Ann Arbor, March 12, 1957.

were 562 mg. per cent. A flat plate of the abdomen was taken and innumerable loops of small bowel were found to be dilated, and a diagnosis of intestinal obstruction, small bowel type, was made. A long tube was then passed without difficulty and the patient was completely decompressed. A barium enema was then obtained and a large defect was noted in the iliocecal region, lying in the cecum. The appearance was in keeping with a tumor of the cecum, causing small bowel obstruction and possibly intussusception.

The patient underwent a laparotomy on June 29, 1956, at which time a golf-ball-sized mass was found in the terminal ileum, which had intussuscepted into the cecum and produced small bowel obstruction. There were innumerable large 2 to 3 centimeter nodes extending throughout most of the terminal ileum mesentery. It was felt that this was probably an adenocarcinoma and a right colectomy was carried out with removal of approximately 4 feet of the terminal ileum with its wedge of mesentery. An ileo-transverse colostomy was carried out. The patient's postoperative course was entirely uneventful and he was discharged on the seventh postoperative day. The pathology report was that of a lymphosarcoma of the ileum, and all of the lymph nodes were involved in the lymphosarcomatous disease. Following discharge, the patient gained weight and continued to feel very well. He underwent a postoperative course of irradiation, and at present has returned to his job with no complaints.

Incidence

Sarcomas of the stomach make up 1 per cent of all of the gastric neoplasms. Approximately half of the sarcomas are lymphosarcomas and constitute the greatest number of sarcomas of the stomach. The age groups most frequently encountered are, in general, considerably younger than those encountered in gastric carcinoma. This point is an important one in regard to differential diagnosis. The average age, as accepted, is in the middle forties, although in one case reported in this paper the patient was seventy-nine. It is equally divided between male and female, although the reticulum cell type of lymphosarcoma is primarily a disease of the male with a ratio of six to one.

Lymphosarcoma of the small bowel occurs almost as frequently as adenocarcinoma does in the small bowel. Its most important site of predilection is in the ileum and usually in young adult males. Ullman collected 109 cases of lymphosarcoma of the intestine and seventy-seven of these occurred in the small bowel; thirty-six of these were in the ileum. These may extend for a relatively long distance of 15 to 20 cm. along the small bowel. They may also present disc-like areas which usually arise in the submucosa. Lymphosarcoma of the large bowel is much less common but does occur, and its most frequent site is the cecum, but also has been reported elsewhere, including the appendix and the rectum.

Clinical Features

The history of this disease does not aid a great deal in the definitive diagnosis of it. Vague epigastric pain which could resemble anything from ulceration to adenocarcinoma is probably the most common symptom, but of course does not particularly help in the diagnosis. Frequently, an ulcer history can be elicited, and the first impression from the history would be that of an ulcer. Bleeding is not very common because the lesion does not produce any great ulceration but, rather, is a submucosal invader and, as a rule, the red blood count will be perfectly normal or only slightly decreased. Vomiting also occurs but is certainly much less frequent in this particular disease because of the lack of mucosal involvement. Loss of weight and chronic fatigue are particularly common findings. Physical examination is not enlightening other than the points previously mentioned; however, if the lesion is large enough, as in approximately half of the cases, a mass can be felt.

Because of the relationship of this to the lymphomas, in general, one would suspect that there would be some alteration in the white blood cell count, but strangely enough this does not occur. The blood picture is of very little help. This is also true of other laboratory examinations, including gastric analysis; the fasting acids are usually normal or even elevated. This is in sharp contrast to the achlorhydria that occurs in carcinoma of the stomach.

A hypothetical summary of the clinical findings would be a younger patient in relatively good nutrition without gross anemia, normal acids and with a palpable mass in the epigastrium. This should arouse some suspicion that this gastric lesion may not be an adenocarcinoma and possibly fall into the lymphosarcoma group.

The symptoms associated with a small bowel lymphosarcoma are those of a neoplasm of the small bowel, in general. The case presented in this paper had symptoms of a low-grade progressive intestinal obstruction, which finally went to complete obstruction and, at operation, an ob-

struction was found with an intussusception of the lymphosarcoma from the terminal ileum into the cecum. This is by no means pathognomonic of a lymphosarcoma. Intussusception does occur relatively frequently. Irvine and Johnstone have reported thirteen cases of perforating lymphosarcoma of the small bowel, the onset of which was usually abdominal pain or vomiting with no previous anorexia or weight loss in most of the patients. Recurrent attacks of abdominal pain were experienced by ten patients. In seven, the pain was mid-abdominal and of a colicky nature, often following food, and was occasionally relieved by a semi-fluid diet. Constipation was relatively frequent, although diarrhea has been reported in several cases. Weight loss was very constant.

Diagnosis

The pre-operative diagnosis of a lymphosarcoma of the gastrointestinal tract is almost impossible, and the pre-operative diagnosis in most cases is that of the more common neoplasm, carcinoma. The gastroscope provides little or no help; the roentgen findings may suggest but certainly are not conclusive that this is a gastric lymphosarcoma. The radiologist also has considerable difficulty in producing a definite diagnosis, especially with reference to the stomach. Deeb and Stilson feel that the most important common factor to all these cases is a remarkable flexibility of the defect as seen fluoroscopically. They also felt that the presence of coarse rugae was helpful.

Identifying the lesion in the small bowel is also difficult. Usually only the signs and symptoms of obstruction are present. A barium enema may reveal a filling defect if there is intussusception or possibly a filling defect in the terminal ileum, should the terminal ileum fill. Bockus lists the following important features, suggesting that a particular gastric lesion may be sarcomatous: (1) youth of the patient, (2) the presence of a firm enlargement of a superficial lymph gland not in the usual location for lymphatic metastasis of gastric cancer, (3) a smooth, sharply circumscribed negative roentgen defect surmounted by a very small crater fleck, (4) presence of a very large but not very deep ulcerating tumor-like roentgen defect in association with a very short history of symptoms, (5) evidence of a very extensive involvement of upper abdominal structures on physical or x-ray examination in association with a very short history of illness, (6) a history of lymphosarcoma of the superficial glands elsewhere. Differential diagnosis of the lesion requires consideration of all benign and malignant tumors of the stomach and small bowel, foreign bodies in the stomach, and the more rare types of gastric lesions such as gastric lues, leukemia, Hodgkin's disease and tuberculosis.

Pathology

It may be suspected at the operating table that the gross specimen could possibly be a lymphosarcoma because of the relatively extensive involvement of the submucosa in the absence of any large ulcerating areas. A bulky tumor should lead one to suspect this diagnosis. This is characteristic of the lesion—significantly so, in the presence of extensive regional lymphatic spread in the retroperitoneal lymph nodes as well as the preaortic and regional nodes. The spleen also is frequently a site of involvement.

Microscopically there are, in general, two forms of the lesion, and this provides some suggestion as to the estimation of prognosis. The two types are the small-cell type and the reticulum-cell type. The small-cell type will respond much more favorably to irradiation. The reticulum-cell type will respond but, in general, the prognosis is much worse. The reticulum-cell sarcoma may occur as an isolated lesion and a radical removal of such may result in an apparent cure.

Treatment

One point needs stressing—one which occasionally may seem too simple to elaborate upon, but which does occur. That is the occasional surgeon who feels that a lesion is so inoperable at laparotomy that biopsy is not necessary, and finds, at autopsy, that this was a lymphosarcoma which might have been extremely sensitive to irradiation. No matter how extensive a lesion may appear at the operating table, biopsy should be taken. The accepted treatment of this, of course, is resection if possible, even though the lesion appears to be very extensive; the major portion of the lesion should be removed, especially if it is an obstructing neoplasm. As is often the case, the surrounding lymph nodes can be irradiated and an apparent cure or at least a remission of the disease may occur for surprisingly long periods. Although

there have been a few reports in the literature of survival for long periods with irradiation, alone, the danger of post-irradiation perforation or hemorrhage must be considered, especially with the involvement of a hollow viscus.

Palliative procedures with postoperative irradiation frequently give a surprisingly good outlook. The nitrogen mustards have been reported to be effective in the treatment of gastrointestinal lymphosarcoma. Joyeux et al. have reported three cases in which nitrogen mustards were used and produced a definite retrogression of the tumor especially in regard to its size; however, this was of only temporary relief and all three patients succumbed to the disease in a relatively short time. In one of the cases they felt that the death of the patient was precipitated by the treatment, even though the tumor decreased in size. They concluded that very early surgical excision was still the treatment of choice for lymphosarcoma of the digestive tract.

Prognosis

In general, one can say that gastric lymphosarcoma has a much better prognosis than that of gastric carcinoma, and this is probably due to the fact of its radio-sensitivity, whereas gastric carcinoma, as we all well know, responds very poorely to radiation. Lymphosarcoma of the small bowel and colon carries a relatively poor prognosis. Five-year survivals in involvement of the stomach are surprisingly numerous. The type of cell in the lymphosarcoma also determines, to a great extent, the relative life expectancy because the small cell lymphosarcoma is much more radio-sensitive and responds better than the reticulum cell sarcoma.

Madding and Walters reported forty-one cases of lymphosarcoma, and in their series the reticulum cell sarcoma offered a postoperative life span of three and thirty-eight hundredths years. Postoperative x-ray therapy in this particular pathological type did not increase the life expectancy. Those with nodal involvement had a life expectancy of two and seventy-nine hundredth years as contrasted with the life expectancy of four and eight hundredth years in those cases without apparent lymph node extension. They also reported that in the small-cell lymphosarcoma gastric resection alone in the treatment offered five and six hundredth years. Their experience with irradiation postoperatively did not alter these results.

Comments and Summary

Lymphosarcoma of the gastrointestinal tract, in general, occurs in younger people in good general health, whose symptoms are somewhat vague and non-conclusive but are of relatively short duration. Physical examination usually does not add anything to a specific diagnosis. Laboratory findings are of no value. The radiologist does offer some help in that the lesion may appear rather extensive at the screen with very little demonstrable ulceration of the mucosa. This also can be suggested to the clinician by the gastroscopist.

Diagnosis is usually made by biopsy at the operating table, and treatment should be carried out at that time if at all possible, removing as much of the lesion with radical resection, if feasible, or removing obstructing lesions as a palliative measure in hopes that postoperative irradiation may be of value in eradicating the remainder of the disease. Despite the extensive appearance of any neoplasm at the operating table, biopsy should be taken in hopes that the microscopic appearance may reveal a lymphosarcoma that will be responsive to irradiation. Postoperative irradiation is generally accepted as good complimental therapy.

The prognosis in this disease, although not good, does provide a longer life expectancy than most malignant neoplasms of the gastrointestinal tract. Many cases of isolated lymphosarcoma have been cured, and certainly the life expectancy with appropriate treatment of surgery, followed by irradiation, can give the patient a much better outlook than other malignant neoplasms of the gastrointestinal tract.

References

Colangelo, Cornelius: Primary lymphosarcoma of the stomach. Am. J. Roentgenol., 72:209 (August) 1954.

Jenkinson, Edward L., Epperson, Keith D., and Pfister, William H.: Primary lymphosarcoma of the stomach. Am. J. Roentgenol., 72:34 (July) 1954.

Pontius, Guy V., and Witkowski, Leon J.: Lymphosarcoma of the stomach. S. Clin. North America, 32:123 (Feb.) 1952.

Madding, G. F., and Walters, W.: Lymphosarcoma of the stomach. AMA Arch. Surg., 40:120, 1940.

Baty, John A.: Gastric lymphosarcoma. British Journal of Surgery, 42:71 (July) 1954.

Deeb, Paul H., and Stilson, Walter L.: Roentgen manifestations of lymphosarcoma of the stomach and small bowel. AMA Arch. Surg., 71:288 (August) 1955.

(Continued on Page 607)

The Metastatic Carcinoid Syndrome

Report of a Case

By Richard C. Bates, M.D. and
Leo W. Walker, M.D.
Lansing, Michigan

SINCE the case report of Biörk, et al[1], and the indepedent report of two cases by Rosenbaum and associates[2] in 1952 and 1953 respectively, the literature on a bizarre syndrome produced by metastases from carcinoid of the bowel has grown rapidly. By 1954 Thorson, et al.[3] were able to review sixteen cases, describe almost all the clinical features of the syndrome and postulate, as has been subsequently proven, that many of the peculiar clinical features of the syndrome might be due to production of excessive amounts of serotonin (enteramine, 5-hydroxytryptamine) by the tumor tissue.[4,5] Thus a new member has been added to the small group of malignant neoplasms that produce endocrine secretions in their metastases. Great interest has been stimulated by the physiologic effects of serotonin, which is somewhat similar to histamine and epinephrine, the production of lesions of the heart valves, and the unusual clinical appearance of these cases.

So far, at least fifty-eight cases have been reported in Sweden, Switzerland, Great Britain and the United States [1-14] to which we wish to add another.

The features of the syndrome include peculiar venous telangiectases of the face "the color of a concord grape"[5]; generalized cyanosis occurring in flushes with "islands" of red blotches in the "blue sea" of the skin[3] associated with transient hypotension; enlargement of the liver; heart murmurs associated with the development of pulmonic stenosis and tricuspid insufficiency; peptic ulceration, gaseous indigestion, abdominal cramps and frequent loose bowel movements; respiratory distress simulating bronchial asthma; pellagra-like lesions of the extensor surfaces of the extremities; dependent edema; joint lesions similar to rheumatoid arthritis; cachexia and death. Mental changes of the type seen in psychoneurosis have been described in a few cases.

Case Report

The patient, a fifty-year-old white man, was admitted to the hospital on October 26, 1953, complaining primarily of weakness and shortness of breath. His illness began in 1950 with indigestion, thought by a physician to be due to a "liver ailment." Blueness of the face was first noted in 1950. In May, 1953 he developed attacks of exertional dyspnea, accompanied by severe pain along the left sternal border radiating to the shoulders and a cyanotic flush, lasting from fifteen to twenty minutes. In August, two months before admission, anorexia appeared and resulted in the loss of 30 pounds in body weight in a period of six weeks. With this, fatigue, orthopnea, swelling of the ankles, and diarrhea up to twenty-four stools daily appeared. The stools were described as light yellow and watery and were observed to float on water. The patient, himself, had observed the appearance of a mass in the abdomen during this time. In infancy he was said to have had one attack of cyanosis, but his past and family histories were otherwise not helpful.

On examination the temperature, pulse, and respirations were normal, but the blood pressure was 98/72. The appearance of the face was most striking in that there were large dilated blue venules appearing like cyantoic telangiectasia in the butterfly area over the cheeks and nose. Cachexia was evident but the patient was in no acute distress. The heart was borderline in size with an organic, Grade 2 systolic murmur along the left sternal border transmitted to the apex and a diastolic murmur in the tricuspid area. The liver was enlarged 18 cm. below the right costal margin and was palpably nodular, firm, but not tender. In the lower extremities, 2+ edema was present up to the knees, with brawny induration and hyperpigmentation of the skin.

Examination of the blood revealed 4.31 million red cells and 14,050 white cells/cu.mm. with a differential count of 62 per cent polymorphonuclears, 28 per cent lymphocytes, 5 per cent monocytes, 4 per cent stab cells and 1 per cent eosinophiles. The hemoglobin was 13.4 gms. (86 per cent) and the red cells and platelets appeared to have normal configuration. In the urine there were 2+ albuminurea, 10 white cells/h.p.f. and occasional hyaline and granular casts. The Van denBerg test was within normal limits but the cephalin flocculation reaction was 3+. The prothrombin time was normal. The alkaline phosphatase was elevated to 15.4 Bodansky units. Chest x-ray examination with fluoroscopy showed pulsations in the left pulmonary artery, but not the right, with no evidence of parenchymal lung disease or cardiac enlargement. Barium studies of the upper and lower gastrointestinal tracts demonstrated only the presence of an enlarged

liver. Stool cultures were negative for *B. typhosus*, Salmonella, and Dysentery groups. Electrocardiograms showed the mean QRS axis to be normal with large complexes over the septal region and inversion of the T waves in leads 2, 3 and aVf. Later tracings showed a generalized decrease in voltage.

Anorexia and weight loss with numerous loose brown stools and crampy abdominal pains after ingestion of even small quantities of water led to an abdominal laparotomy performed by Dr. Ralph Wadley on November 13, 1953. The liver was enlarged to below the umbilicus and was studded with hard irregular nodules measuring up to 1 cm. in diameter. A biopsy was taken from two separate nodules.

Microscopic examination of the liver biopsy specimen revealed a metastatic new growth (Fig. 1). The cells of this new growth were small and polyhendral in shape and exhibited a striking uniformity in size, shape, and in staining qualities. The nuclei were uniformly dark-staining and the cytoplasmic borders were indistinct. Only a very occasional mitotic figure was found. The cells were closely packed and arranged in solid masses and in anastomosing columns separated by narrow bands of dense hyaline connective tissue. In a few areas there was an acinar architecture and in other areas there were small atypical glandular structures. The adjacent liver tissue around the new growth exhibited fatty degeneration. The new growth was characteristic of a carcinoid (argentaffinoma or argentaffin carcinoma). The most likely site for the primary growth was considered to be in the gastrointestinal tract.

The skin lesions continued to be striking during the entire course of his illness, and in addition to the facial changes mentioned above, he experienced attacks of generalized bluish discoloration, particularly under excitement or exertion. When the blue areas were subjected to light pressure, they cleared and were replaced with a coral pink tint giving the appearance of "islands of red in a sea of blue." Rheumatoid arthritic changes appeared in the joints of the hands and attacks of dyspnea associated with expiratory wheezing were noted.

At the patient's insistence, irradiation therapy was given over the liver, but no benefit was apparent. The radiologist observed that the skin was unusually resistant to irradiation. He declined steadily and died January 8, 1954.

Autopsy Findings.—The subject measured 179 cm. in length and weighed about 110 pounds. Cachexia was extreme. Minute hemorrhagic areas appeared as a fine punctate rash over the face. Edema of the legs and irradiation changes over the right upper quadrant were noted. One thousand cc. of straw-colored fluid were present in the right pleural cavity. The heart weighed 225 grams and the right ventricular wall was 8 to 10 mm. in thickness with definite hypertrophy of the muscle. The tricuspid valve showed nodular thickening of the leaflets and the pulmonary valve was stenosed so that it would admit only the tip of the index finger. The pulmonary cusps were greatly thickened and fixed. There was no calcification of the tricuspid valve leaflets or pulmonary valve cusps. The aortic and mitral valves were normal. There were no congenital cardiac defects.

One tumor nodule was present in the right lung. It measured 5 mm. in diameter and was subpleural in location. In the abdomen, the liver was greatly enlarged, weighing 3,150 grams, and was studded with tumor nodules measuring up to 4 cm. in diameter. The primary tumor was found in the ileum, 183 cm. from the ileocecal valve (Fig. 2). It measured 18x20 mm. in diameter. It was elevated above the surrounding mucosa 5 to 10 mm. On section it was gray-white in color and very firm in consistency. It extended through the complete thickness of the wall of the bowel and into the serosa. The regional mesenteric lymph nodes were enlarged up to 2 cm. in diameter and, grossly, showed replacement by gray, white, firm tumor tissue. The appendix showed scarring and obliteration of the lumen. There was no gross evidence of a carcinoid of the appendix. No tumor tissue could be seen in the pancreas by gross examination. The peripancreatic lymph nodes were greatly enlarged and were replaced by tumor tissue.

Microscopically, the tricuspid valve leaflets and the pulmonary valve cusps were greatly thickened, due to fibrous tissue, within which there were occasional dilated blood spaces (Fig. 3). Verhoeff's elastic tissue stains revealed the valve leaflets and cusps to be overlaid with this fibrous tissue. The ventricular and atrial endocardium around the valve rings was similarly thickened (Fig. 5). The collagen and elastic fibers were intact and this fibrous tissue appeared to be deposited on the valves. Both surfaces of the valves were involved. No elastic fibers were demonstrated in the fibrous tissue. There was much intercellular ground substance. There were no inflammatory cells. There was no calcification. The findings in the valves were the same as those recently demonstrated by McDonald.[13]

The tumor and its metastases in the liver, lungs, mesenteric and retroperitoneal lymph nodes, and pancreas, all showed the typical appearance of carcinoid with a positive reaction on silver stains. The new growth in the ileum was seen to be arising within the mucosa (Fig. 4) and was infiltrating the submucosa and muscular wall and extending into the serosa. There was no evidence of the new growth in serial sections of the appendix. The fact that carcinoids tend to be multiple in origin was considered, but the new growth, in all of the locations other than the ileum, appeared to be metastatic in origin.

Discussion

With the exception of the psychoneurotic features which have been reported in only three cases and may not be a part of the syndrome, our case presented all the previously described features. With the knowledge of the existence of this syndrome, the appearance of these patients is so distinctive that they should be diagnosable at first glance. While most of the reported cases, like ours, have been diagnosed in retrospect, sev-

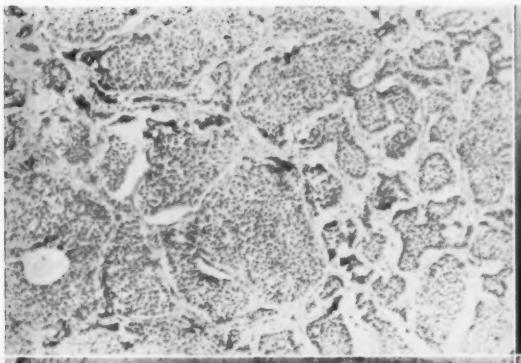


Fig. 1. *(left above)* Liver biopsy (H. and E. stain, x 80).



Fig. 2. *(right above)* Tumor of ileum.

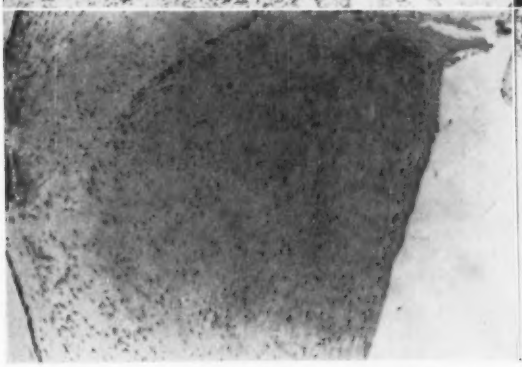


Fig. 3. *(left below)* Pulmonary valve cusp (H. and E. stain, x 80).

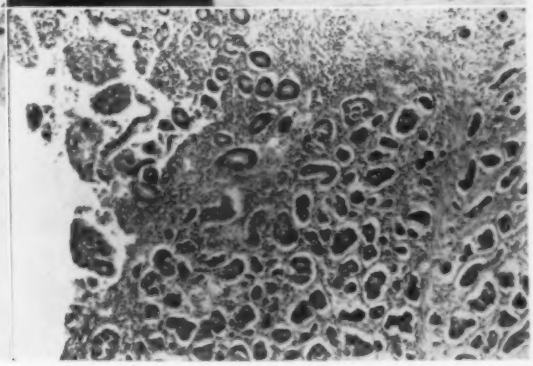


Fig. 4. *(right below)* Tumor of ileum. Normal mucosa at bottom on right. (H. and E. Stain, x 80).

eral have been correctly diagnosed as having metastatic carcinoid from the presence of the flushes alone. Once suspected, one may carry out a simple urine test for the urinary metabolite of serotonin, 5-hydroxyindoleacetic acid (5-HIAA), for confirmation.[16]

While the metabolism of serotonin from tryptophane has been worked out[4] and the physiologic action of this material has been observed, the exact mechanisms for production of the many clinical features of this syndrome remain a subject of discussion. The skin changes and asthma are thought to be a direct result of the action of serotonin on the smooth muscle of cutaneous blood vessels and bronchioles. We have observed similar skin changes of a milder degree in instances of intense peripheral vasoconstriction and shock resulting in cyanosis of static blood in the capillaries, which, when pressed out was replaced by oxygenated blood of a pinker hue, giving the appearance of red islands in a blue sea. On the other hand, as pointed out by Branwood and



Fig. 5. Thickened endocardium at tricuspid valve ring. Myocardium on right. Note endocardium in center with overlaid fibroid tissue on left. The fibrous tissue does not take the elastic stain (Verhoeff's) x 80.

capillaries, which, when pressed out, was replaced

Bain,[6] Peacock in 1866 observed that, when cyanosis occurred in pulmonic stenosis, the skin was a reddish hue. Further, if vasoconstriction is the sole source, the concomitant hypotension remains unexplained.

The diarrhea could be due to the mechanical effects of the tumor, but since the primary lesion is invariably small and may antedate the metastases and diarrhea by many years, two alternative explanations have been offered: (1) serotonin causes increased peristalsis, or (2) excessive consumption of tryptophan, a precursor of niacin, by the tumor for the production of serotonin results in pellagra of which the diarrhea and skin changes are features.

Most puzzling and stimulating are the changes in the valves of the right side of the heart. It has been suggested that these are in some way a direct effect of serotonin on the valves, and that subsquent passage of the blood through the lungs reduces the concentration of the hormone so that the left heart valves are not similarly affected. An instance of a patient with coincident patent foramen ovale who did develop lesions of the left heart valves has been mentioned in support of this theory.[4]

So far, the arthritic changes occurring in a few patients remain unexplained but offer an interesting lead for investigation into a possible factor in the etiology of rheumatoid arthritis.

Serotonin is known to affect brain function, but mental changes have only been described in a few cases and since they gave the appearance of psychoneurosis rather than organic brain disturbances, these changes are possibly coincidental due to the emotional impact of a severe illness upon poorly adjusted individuals.

In addition to the puzzling physiologic features of this illness, there are some unusual pathologic aspects. The vast majority of carcinoids (90 per cent) occur in the appendix,[13,17] metastasize only locally and have not, so far, been reported as causing this syndrome in a single instance. The reported cases with autopsy invariably show widespread metastases to liver with, in many instances, pancreatic, ovarian and adrenal involvement as well. Serotonin is destroyed by the normal liver, so it is thought that metastases in the liver sufficient to destroy part of its function while producing serotonin which can escape the liver, are a necessary feature. One instance of a metastasis in the testis which was removed with total but temporary relief of the flushes[8] supports this. An alternative explanation is that carcinoid arising in the appendix is somewhat different from that arising in the small bowel.

Summary

Report is made of a case of the metastatic carcinoid syndrome presenting almost all the previously described features of this new entity. Clinical and pathologic features are described, along with a discussion of current theories as to their physiologic origin.

References

1. Biörck, G., Axen, O., and Thorson, A.: Unusual cyanosis in a boy with congenital pulmonary stenosis and tricuspid insufficiency. Fatal outcome after angiocardiography. Am. Heart J., 44:143, 1952.
2. Rosenbaum, F. F., Santer, D. G., and Claudon, D. B.: Essential telangiectasia, pulmonic and tricuspid stenosis and neoplastic liver disease. A possible new clinical syndrome. J. Lab. & Clin. Med., 42:941, 1953.
3. Thorson, A., Biörck, G., Björkman, G., and Waldenström, J.: Malignant carcinoid of the small intestine with metastases to the liver, valvular disease of the right side of the heart (pulmonary stenosis and tricuspid regurgitation without septal defects), peripheral vasomotor symptoms, bronchoconstriction and an unusual type of cyanosis. A clinical and pathologic syndrome. Am. Heart J., 47:795, 1954.
4. Sjoerdsma, A., Weissbach, H., and Udenfriend, S.: A clinical physiologic and biochemical study of patients with malignant carcinoid (argentaffinoma). Am. J. Med., 20:520, 1956.
5. Heimark, J. J., and Parkin, T. W.: Syndrome associated with metastatic carcinoid tumor: report of a case. Proc. Staff Meet. Mayo Clin. 31:3, 1956.
6. Branwood, A. W., and Bain, A. D.: Carcinoid tumor of the small intestine with hepatic metastases, pulmonary stenosis and atypical cyanosis. Lancet, 2:1259, 1954.
7. Dockerty, M. D., and Scheifley, C. H.: Metastasizing carcinoid: report of an unusual case with episodic cyanosis. Am. J. Clin. Path., 25:770, 1955.
8. Jenkins, J. S., and Butcher, P. J. A.: Malignant argentaffinoma with cyanosis and pulmonary stenosis. Lancet, 1:331, 1955.
9. Rambo, O. N., Jr., Gore, I., Vance, V. K., and Brown, H.: The syndrome of intestinal carcinoid with massive hepatic metastases and endocardial fibrosis with tricuspid and pulmonic stenosis: its recognition and significance (Abstr.). Am. J. Path., 30:625, 1954.
10. Page, I. H., Corcoran, A. C., Udenfriend, S., Sjoerdsma, A., and Weissbach, H.: Argentaffinoma as an endocrine tumor. Lancet, 1:198, 1955.
11. Bean, W. B., Olch, D., and Weinberg, H. B.: The syndrome of carcinoid and acquired valve lesions of the right side of the heart. Circulation, 12:1, 1955.
12. Fraser, I.: Argentaffinoma (carcinoid tumor) with cyanosis. Lancet, 2:174, 1955.
13. McDonald, R. A.: A study of 356 carcinoids of the gastrointestinal tract. Am. J. Med., 21:867, 1956.
14. Spain, D. M.: Association of gastrointestinal carcinoid tumor with cardiovascular abnormalities. Am. J. Med., 19:366, 1955.
15. Mills, G. Y.: The syndrome of intestinal carcinoid, pulmonary valvular stenosis and cutaneous flush. Ann. Int. Med., 45:1213, 1956.
16. Sjoerdsma, A., Weissbach, H., and Udenfriend, S.: Simple test for diagnosis of metastatic carcinoid (argentaffinoma). J.A.M.A., 159:397, 1955.
17. Dockerty, M. B.: Carcinoids of the gastrointestinal tract (Ed.). Am. J. Clin. Path., 25:794, 1955.

Malignant Melanoma

Clinical and Pathological Behavior in 127 Cases

By J. L. Ponka, M.D.
D. M. Evans, M.D.
and J. H. Wylie, M.D.
Detroit, Michigan

ALTHOUGH malignant melanoma[1] is not very common, it is a neoplasm that continues to present clinicians with problems of diagnosis and treatment. For purposes of orientation it would be well to refer to the classification of nevi as offered by Allen and Spitz,[1] as follows:

Benign

1. Intradermal nevus (common mole)
2. Junctional nevus
3. Compound nevus
4. Juvenile melanoma
5. Blue nevus (Jadassohn-Tièche)

Malignant

1. Melanocarcinoma (from junctional nevus or compound nevus)
   (a) Superficial
   (b) Deep
2. Malignant blue nevus

We cannot go into the pathological features in any detail, nor can we dwell upon some of the controversial features involved in the pathology, but a few comments are in order regarding some of the more widely accepted concepts. It is agreed generally that common moles or intradermal nevi do not undergo cancerous change. Many pathologists and dermatologists agree on this point and state that they have never seen such a change. They are not commonly found on the palmer aspects of the hands, soles of the feet, or genitalia.

Junctional nevi tend to be flat, smooth or slightly raised, and of varying shades of brown. They may occur in the skin, or in the mucous membranes of the body. Pigmented lesions on the genitalia, plantar surfaces of the feet, palms and digits should be considered as junctional. These are located entirely within the epidermis and are characterized by: a loss of cohesion of cells beginning with the basal cells and extending progressively to the outermost layers of the epidermis, a vacuolization and loss of prickles of the involved epidermal cells, and a scattered and increased melanin pigmentation and Dopa positively (Allen and Spitz[1]). By "compound nevus" is implied the presence of an intradermal nevus and an overlying junctional nevus of the epithelium. It is well known that the moles of children may be indistinguishable from the malignant melanoma of the adult. However, their clinical behavior in children is one of benignancy. It is indeed rare for one of these lesions to show malignant behavior.

The blue nevi occur on the buttocks and the dorsal aspects of the hands and feet. They are found less commonly on the face. Their color is the result of the melanin present and their location in the epdermis.

Finally, Couperus and Rucker[2] have pointed out that a melanoma can be considered malignant if the following features are present in addition to junctional changes: inflammatory infiltrate at the periphery of the lesion, more than an occasional mitotic figure, giant cells with a single bizarre nucleus, marked pleomorphism, general enlargement of all tumor cells, and tumor cells and mitoses in the epidermis.

Our particular interest in this malignancy was stimulated by two features which it manifests—its capricious behavior and its high degree of fatality. We wondered why it carried such a dismal prognosis when the lesions occurred in areas where they could be seen and treated early. We recognize that others have long since made similar observations, but we believed that our 127 cases (accumulated over a period of twenty-five years) might lead to some interesting data.

Some of these patients came to us after having initial treatment elsewhere. Others went to other hospitals and clinics for their care after having been seen in our hospital. These patients, when confronted with the gravity of their problem, are inclined to seek the advice of several different physicians with varying types of training.

The sex incidence requires only the briefest

From the Department of General Surgery, Henry Ford Hospital, Detroit, Michigan.

Presented before the Michigan Chapter of the American College of Surgeons, Ann Arbor, March 12, 1957.

comment. Approximately half of the cases were in male patients. This same observation has been made many times. Sixty-seven of our cases were male and sixty were female patients.

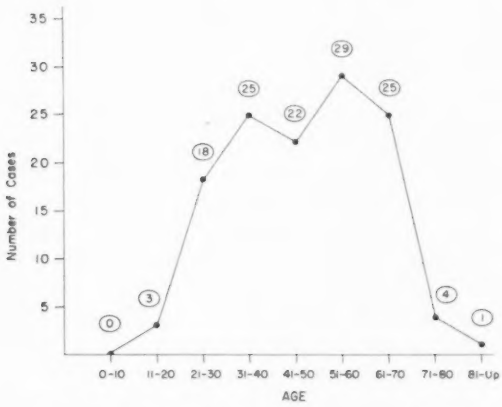


Fig. 1. Age distribution of malignant melanoma.

The age incidence cannot be stated so simply. In our series we found no cases in the pre-pubertal ages. This does not mean that they do not occur, but rather that they are infrequent in pre-pubertal children. This opinion is more substantially confirmed by the report of Allen and Spitz.[1] They found only five instances of melanocarcinoma in children in 934 cases which they studied most carefully. The age distribution of our group is shown in Figure 1.

Chief Complaint

We became interested in what it was that first caused the patient to seek the advice of a doctor. Seventy-one patients (56 per cent) complained of a "mole." It must be emphasized that patients used different adjectives to describe the presenting lesion. The patients' vocabulary yielded such terms as "dark spots," "growing spots," "bleeding moles," "birth marks," "dark lump," "red spots," and simply "growths." Other terms applied by the patients include "ulcer," "blister," "cyst," "wart," "pimple" or "tumor." We fear that too often the patient's complaint was considered to be a diagnosis. More particular attention was directed to a history of bleeding, growth, repeated injury and color change. These complaints were present in some form in 54 per cent of the cases in this series. Such complaints could be expected

TABLE I. LOCATION OF MALIGNANT MELANOMA IN 127 CASES

Eye		14
Skin		101
	Head and neck	25
	Trunk	23
	Upper extremities	12
	Lower extremities	41
Mucous membranes		4
Central nervous system (meninges)		1
Primary undetermined		7
Total		127

TABLE II. TIME INTERVAL BEFORE SEEKING TREATMENT

	Patients
At once	25
7 to 12 months	41
13 to 18 months	21
19 to 24 months	13
25 to 36 months	9
After 37 months	12

to arouse the suspicion of the clinician to the fact that he is dealing with an unusual and perhaps serious lesion. Some of our patients had interesting, if not unusual, complaints. One young man was rejected from military service because of "a spot on my lung." Studies failed to reveal the primary lesion for a long period of time, which was finally found on his heel. Three other patients had gastrointestinal symptoms; one with a primary esophageal neoplasm had dysphagia, another with a rectal lesion had constipation, and a third had intestinal obstruction (he had an intussusception caused by a metastasis to the ileum).

Headache and convulsions are seen as a result of intracranial spread. We have seen two patients with a picture of sepsis, including chills, fever, malaise, and expectoration of frothy sputum, following widespread metastases. These cases presented a real problem in differential diagnosis.

The skin proved to be the site of the most frequent involvement, particularly about the plantar area of the feet, about the toes, the palms, the head, neck and back, and in subungual areas. The eyes showed a fair incidence, with involvement of the uveal tract. None of our cases involved the genitalia, primarily. The mucous membranes were the origin of the malignancy in four instances, all of them patients expiring within one year. The striking feature to be noted is that malignant melanoma makes its first appearance so often in areas that are readily visible and quite accessible to examination and observation, and yet it carries such a poor prognosis.

Sixty-six patients were seen within the first

TABLE III. SUMMARY OF INITIAL TREATMENT

	Patients
Local excision	58
Enucleation of the Eye	13
Cautery (Electrical, Chemical with Silver Nitrate and Nitric Acid)	12
Irradiation	10
Biopsy	10
Excision with Skin Graft and Regional Lymph Node Dissection	10
Application of Ointment	4
Wide excision with Skin Graft	4
Incision and Drainage	3
Radical Mastectomy	1
Freezing	1
Aspiration with needle	1
Injection	1

Note: Some of these patients received more than one type of treatment, hence the discrepancy in the statistics.

year after the onset of bleeding, color change, growth or tumor formation. Thus, half of the patients present themselves for treatment within the first twelve months. These facts should be correlated with the next chart, which describes or lists the type of treatment that was given initially.

Initial Treatment

This was carried out in the office of the general practitioner, radiologist, general surgeon, plastic surgeon, dermatologist, orthopedist, and in large university hospitals and in clinics. Some were treated by osteopathic physicians originally. This knowledge will help us to understand the great variation in treatment.

We are presenting this list of early treatments for two reasons: (1) to show that there was a lack of appreciation of the nature of the local lesion and (2) to indicate that there is some uncertainty as to what constitutes a good local treatment.

Effectiveness of Local Treatment

When we try to evaluate the effectiveness of the initial local treatment, we should consider the frequency of local recurrence. Of course, in a far advanced local lesion, the process will be difficult to control regardless of the fact that very radical treatment may have been employed. In this series there was a failure to control the primary lesion in fifty-three cases (42 per cent of the total). Preston et al.,[3] also found that when initial treatment failed to control the primary lesion, the five-year survival rate was poor (one among fifty-eight patients). Irradiation was just as unsuccessful in their series as it is in the present series. Inadequate local excision, cautery (chemical, with silver nitrate and nitric acid), irradiation (x-ray and radium), application of ointments, freezing, aspiration and injection treatments all contributed to this poor result.

At least 23 per cent of the cases received inadequate initial local treatment by all standards.

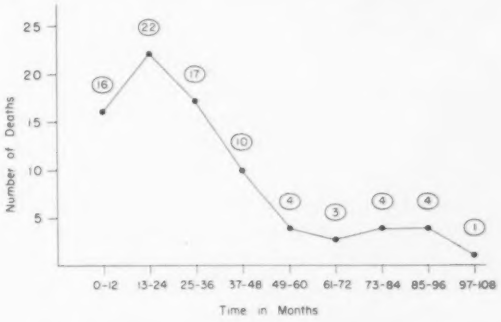


Fig. 2. Deaths following onset of malignant meloma.

Total Excision Urged

Biopsy may be necessary in some cases, but we would urge that the lesion be excised in its entirety, rather than partially. Microscopic examinations should always be done on the specimens.

Where Do Metastases First Occur?

Since there is a failure to control the local lesion in so many patients (42 per cent of this series), we thought it would be of interest to consider metastatic lesions. This might give us some information of value in planning further treatment. In order of frequency, we found metastases most commonly in the inguinal, cervical, and axillary nodal areas. Generalized metastases were present in twenty of the patients when first seen, and terminal care only was given to these.

Results.—Sixteen of our patients expired of their disease within the first year (Fig. 2). Two of these had intracranial metastases, three had lesions involving the mucosa (rectal, oro-nasal and esophageal). One expired of heart failure. Eighty-four of our patients are known to be dead. Four died of unrelated causes. Only one case out of 127 has been lost to follow-up. Forty-three patients are still alive, but twenty-two have been followed for less than five years. Since the mortality rate is so high during this period, and our series relatively small, we are unwilling to draw any conclusions as to the effectiveness in controlling this highly malignant process in cases followed for less than five years. We already know that

TABLE IV. PROCEDURES CARRIED OUT ON SEVENTEEN CASES SURVIVING FIVE YEARS OR LONGER

Local excision only	7
Enucleation of eye	2
Local excision plus inguinal lymphadenectomy	3
Local excision plus axillary node dissection	2
Radical mastectomy	1
Amputation of thumb	1

five patients are still alive, but have residual disease. This leaves only sixteen patients (13 per cent) living after five years, and presumed to be free of their disease.

In this series approximately, one half of the patients had some form of local excision and comparatively few had early radical procedures. Later in the disease, a variety of radical procedures were carried out. It is when the disease is widespread, that the patient, his family, and his doctor are willing to consider such procedures as amputation, quarterectomy, extensive excision with skin graft, and regional lymphadenectomy. Three of our cases had major amputations and all three did poorly because of the advanced nature of their disease. Others had late regional lymphadenectomy with re-excisions of the local areas, and in a few, skin grafts were done. These patients generally did poorly, but there was palliation in some. For instance, in some cases large tumor masses were excised with relief of local discomfort.

Recently we have adopted a more radical approach to the problem, but our series is small and of short duration. No conclusions are warranted. However, Pack[4] points out that prior to 1940, the ten-year definitive cure rate was 12 per cent. After that, they adopted radical surgical treatment. In a total of 1,190 cases of malignant melanoma he found that the five-year survival rate was 14.1 per cent when the nodes were positive for metastases, and 40.5 per cent for those with lymph nodes free of metastases. McCune[5] treated forty cases of melanoma with surgical excision and regional node dissection. When the nodes were positive, there were two survivals out of twenty-three cases, whereas all seven patients without palpable lymph nodes lived at least six years after radical block dissection of the regional glands.

Autopsy Findings.—We were impressed by the metastases in this malignancy. There were twenty-two autopsies in this series. Table V lists the organs involved and the number of times metastatic tumor was found.

TABLE V. ORGANS SHOWING METASTATIC TUMOR IN TWENTY-TWO AUTOPSIES

Lymph nodes	20
Liver	15
Lung	18
Skin	13
Pancreas	12
Skeletal system	10
Central nervous system	10
Heart and pericardium	10
Adrenals	7
Kidney	7

The frequency of lymph node involvement is very great and the distribution among various groups of nodes is extensive. This same finding was noted in the frequency of regional metastases after local treatment. These findings also help us to understand why it is that these patients have relatively short survival periods following extension of the process beyond the regional nodes.

Summary and Conclusions

1. Only 13 per cent of our 127 cases of malignant melanoma survived for a period of five years, or longer, without metastases.

2. Patients, as well as the profession, should be aware of the serious implications of such changes as growth, bleeding ulceration and color changes when seen in connection with pigmented skin lesions.

3. Inadequate local treatment in this series is reflected in the results. Forty-two per cent of these patients had local recurrences after initial treatment.

4. Treatment with x-ray, cautery (chemical or electrical), incision and drainage, freezing, injections and ointments is condemned.

5. Excision biopsies are encouraged. Microscopic examinations should always be done.

6. We encourage wider resections of the initial lesions.

7. We believe that the scope of the operative treatment should be expanded to include the regional lymph nodes, since they are so often the site of secondary involvement.

8. Another error often made is that radical surgery is not carried out early enough.

(References on Page 617)

Cancer of the Breast

By Max Cutler, M.D.
Beverly Hills, California

CANCER OF THE BREAST is not only the most important of the major forms of cancer, it is also one of the most treacherous. Fortunately, however, the disease lends itself to a reasonable degree of prevention and early diagnosis.

Although radical mastectomy with or without postoperative radiation is the accepted method of treatment for presumably operable mammary cancer, this view has been challenged in recent years. It has been suggested that simple mastectomy followed by a special type of radiotherapy has certain advantages. This subject is in a state of controversy.

Another development in recent years has been the extension of the surgical procedure to include removal of mediastinal lymph nodes. This development also is at present in a controversial state. There is an increasing tendency to avoid the use of prophylactic postoperative radiation as a routine procedure. Efforts to control advanced and metastatic carcinoma of the breast with steroid hormones have been partially successful and form a subject of active research.

The most interesting and perhaps the most important phase of the problem of mammary cancer is related to the so-called precancerous lesions. Cystic disease of the breast, papillomata and so-called Schimmelbusch's disease—commonly regarded as precancerous lesions—require clarification. An effort is made in this presentation to interpret the significance of these lesions and to indicate the proper course of treatment.

"Precancerous" Lesions

There is, perhaps, no organ in the body which has afforded a greater opportunity to study precancerous states than has the mammary gland. The removal of this organ for various pathologic conditions that precede cancer has supplied important data which have given us an opportunity to study its pathology in great detail. The technique of cutting whole serial sections by the giant microtome, as first introduced by Sir George Lenthal Cheatle, of London, has further enhanced our knowledge of breast pathology, particularly because this method enables us to study the topographic distribution of disease in a way which the small section method does not allow.

A mass of clinical, pathologic, and experimental data has accumulated which clearly indicates that cancer, in general, and cancer of the breast, in particular, are not sudden events or accidents in previously normal tissues. On the contrary, it would seem that cancer as a rule is the end-result of a series of changes which may have begun many years before. In the breast it has been possible to demonstrate a series of interrelated and consecutive tissue changes which progress slowly over a period of many years. Mazoplasia is not a step in this pathologic process, and the first microscopic evidence of the changes which ultimately lead to cancer is the formation of microscopic cysts. The epithelial hyperplasia which leads to cyst formation may stop, and the breast may remain purely cystic throughout the life of the individual, but in a considerable proportion, the hyperplasia continues and sooner or later becomes complicated by the advent of the neoplastic process or the formation of papillomata. The combination of cysts and papillomata gives rise to a condition known as Schimmelbusch's disease. Again, a breast which is the seat of Schimmelbusch's disease may remain so throughout the lifetime of the individual, but in a considerable proportion of cases the epithelial change progresses, and at some point in this process epithelial cells invade outside boundaries and cancer is established.

The evidence leads me to believe that cysts and papillomata are precancerous or potentially cancerous states. These terms imply that if the epithelial changes associated with these conditions progress, cancer is the inevitable consequence. I fully recognize, however, and admit that the epithelial changes may regress at any point and disappear, or that they may be arrested and remain stationary throughout the lifetime of the individual, but I

Presented at the Annual Session of the Michigan State Medical Society, Grand Rapids, September, 1957.
From the Surgical Staffs, Cedars of Lebanon and St. Johns Hospitals, Los Angeles; formerly Director of the Chicago Tumor Institute.

insist that if they progress, carcinoma is finally established. By the designation "pre-cancerous" I do not mean that they inevitably become cancerous, but that they are potentially cancerous. It is also important to emphasize at this point that the events which have been described may occur with varying degrees of rapidity. Many of these changes require as long as thirty or even forty years to develop. At the other extreme, however, the process may be very rapid; in fact, it may be so rapid as to end in cancer without leaving any discernible trace of the previous stages through which it has passed. In the latter examples, one cannot be absolutely certain whether cancer has arisen by this process or by another unknown method.

Cystic disease of the breast is usually diffuse and often bilateral. These facts were especially emphasized by Reclus, and the condition is now usually designated as Reclus' disease. In many instances, one cyst outgrows its neighbors and reaches a sufficient size to be clinically palpable. In these larger cysts, the epithelium is usually so degenerated as to fail to respond to stimuli, and for this reason cancer rarely complicates the larger cysts. When cancer is discovered in the wall of a cyst it has usually originated in the active epithelium of a duct which enters it and not in the degenerated epithelium which lines the cyst.

It is, in general, not fully appreciated that when a cyst is clinically palpable as a single lesion it is almost invariably surrounded by numerous smaller cysts that are too small to be palpable. It should be noted also that microscopical cysts are potentially more dangerous than the large, palpable cysts. The common error that is committed in an effort to practice conservatism is to perform a limited excision of the palpable cyst which is innocent, and not remove the surrounding smaller cysts which are more likely to be complicated by the cancerous process. In the treatment of cystic disease of the breast, excision of the affected segment rather than local excision of the palpable cyst should be practiced.

Clinical Considerations

The well known tendency of cancer of the breast to disseminate early and widely renders this disease one of the most malignant of all the types of cancer with which we are familiar. Pending the acquisition of a more intimate knowledge concerning the etiologic factors in the origin of mammary cancer, the most important practical problem that confronts us is the question of early diagnosis. It is an unfortunate circumstance that cancer of the breast in its early stages is an entirely painless disease. In fact, it is well known that mammary cancer may proceed through a considerable part of its natural course and reach an advanced stage without causing pain. In my experience, it is because of this fact that most women fail to consult their physicians in the early stage of the disease. The medical profession teaches the laity to consult a physician the moment a palpable tumor appears in the breast. But actually, once a tumor is palpable by the patient, the disease has already reached an advanced stage. Efforts to circumvent this difficulty have led in the direction of suggesting periodic examinations, but this problem is complicated as it raises the question of how often a patient should be examined and even though a patient be examined twice annually, a cancer of the breast may have existed for four or five months before a subsequent examination. Perhaps the most fruitful field in the prevention of mammary cancer lies in the recognition, proper interpretation, and treatment of the precancerous states, and immediately I refer to such conditions as papillomata, Schimmelbusch's disease, and Paget's disease of the nipple.

Hemorrhagic Discharge.—A spontaneous, hemorrhagic discharge from the nipple is due either to a single papilloma or multiple papillomata, or may be due to beginning duct carcinoma. In the absence of a palpable tumor, the possibility of the presence of duct carcinoma is remote, although I have observed one example in which this sign, unaccompanied by a palpable tumor, was caused by a microscopic duct carcinoma. In the presence of a palpable tumor, surgical interference becomes clearly indicated. If no tumor can be palpated, transillumination of the breast frequently permits localization of the underlying lesion. When the papillomata are of microscopic dimensions, transillumination fails to disclose them. The treatment of a breast which is the seat of a hemorrhagic discharge from the nipple and in which no tumor can be felt constitutes a difficult and perplexing problem. The choice of treatment depends upon

numerous circumstances, the age of the patient being one important factor. In several examples of this type in which the patients have refused surgical interference I have performed interstitial radiation of the breast. This procedure has resulted in a fibrosis of the lesion and a cessation of the bleeding, and I regard it as a useful procedure in selected cases.

Palpable Tumors.—There is a tremendous variation in the consistency of normal breasts, and the same breast usually undergoes marked changes during various stages of the menstrual cycle. The interpretation of "lumps" in the breast and areas of localized nodularity is indeed a difficult matter. The most important aid in the interpretation of a suspected "lump" or nodularity is to determine by very careful palpation in a sitting and lying position the condition of the remainder of the breast, and also the condition of the opposite breast. Only in this manner can one establish the consistency of the remainder of the mammary tissues, and these findings constitute an important control in the patient who is being examined. The most important finding in a suspected "lump" is the presence of a localized nodularity in one breast which cannot be discovered in any other portion of the breast or in the opposite breast. Localization is the most important clinical finding in suspected lesions of the breast. The discovery, therefore, of several "lumps," or several nodularities, should immediately raise the suspicion that the condition is physiologic rather than pathologic, and that the condition is benign rather than malignant. It is for this reason that multiple masses in, or a multi-nodularity of, one or both breasts is usually the sign of a benign process. It is also of the greatest importance, in examples in which the interpretation of the clinical findings is difficult, to examine the patient at different stages of the menstrual cycle. By this procedure one frequently discovers that certain suspected nodularities have completely disappeared and the diagnosis at once becomes evident. The more common conditions which cause multi-nodularity are: (1) mazoplasia; (2) multiple fibro-adenomata; (3) multiple cysts.

The most important sign of cancer of the breast is the presence of a single, discrete tumor, or a localized nodularity in one breast. The absence of skin adherence and retraction of the nipple cannot be considered as evidence that cancer does not exist. The safest attitude to adopt is to regard a single, localized tumor in one breast of a woman over twenty as cancer until proved otherwise.

Transillumination.—In 1929 the writer first described transillumination of the breast as an aid in differential diagnosis. Other observers who have utilized this procedure have generally agreed that it is a distinct aid in the interpretation of certain lesions of the breast. During the examination, it is essential that the room be absolutely dark and that the transilluminating lamp be sufficiently powerful to penetrate the various lesions that we encounter in the mammary gland. The author has found transillumination a distinct help in the interpretation of the following conditions: (1) in the differential diagnosis between cysts containing clear fluid and solid tumors; (2) in the diagnosis of hematoma of the breast following trauma; and (3) in the localization of duct-papillomata underlying hemorrhagic discharges from the nipple.

The procedure does not differentiate between a benign and malignant solid tumor such as fibro-adenoma and carcinoma. A deep-seated cyst may exhibit all the classical signs of cancer, including adherence of the overlying skin and retraction of the nipple. If the cyst contains clear fluid it will transilluminate clear, and transillumination under these circumstances is a valuable aid in differentiating between the two conditions.

A trauma to the breast may cause interstitial hemorrhage and a resulting hematoma. Frequently the mass that is thus formed exhibits skin adherence and presents the clinical picture of carcinoma. Indeed, the similarity to carcinoma is so striking that mastectomy has frequently been performed for this condition. Transillumination of a hematoma indicates a shadow that is caused by the blood pigment which has a specific appearance. The opacity is intense, irregular, and slowly fades toward the periphery. Based upon these findings alone, I have withheld exploratory incision in a series of cases. Repeated transillumination under these circumstances shows a gradual diminution in the extent and intensity of the opacity and its final complete disappearance. It may require as long as three months for the shadow to disappear. These lesions are uncommon, but, when encountered, present a difficult clinical problem, in the solution of which I have found transillumination of considerable aid.

Transillumination is perhaps most useful in breasts which are the seat of a hemorrhagic discharge from the nipple. In most cases, transillumination discloses opacities which indicate the site and distribution of the underlying lesion. This finding in breasts in which no tumor can be palpated is of considerable help in deciding the therapeutic procedure to be adopted.

The Surgical Removal of the Breast

Although the surgical operation for removal of the cancerous breast is regarded as having been standardized, the differences in the execution of this procedure in the hands of different surgeons are remarkable. From time to time isolated attempts have been made to diminish the scope and extent of the radical operation for cancer, but few authorities upon the subject today are willing to admit the soundness of this tendency. There is little dissension from the view that the surgical procedure must be the radical operation as introduced and developed by Halstead, including the removal of a wide area of skin, the underlying breast, both pectoral muscles, fascia and the axillary contents.

The advent of radiation as a postoperative measure in the treatment of mammary cancer has developed the tendency among some surgeons to diminish the extent of the surgical procedure, particularly as regards the skin. I believe that this is a dangerous position to adopt and that the extent of the surgical procedure should not be influenced by the fact that the patient is to receive prophylactic postoperative radiation. Since the proportion of small, localized growths is on the increase, the problem of skin removal becomes less important, because in the treatment of small lesions adequate skin may be sacrificed and the defect closed after sufficient undermining of the flaps without tension and with no necessity for skin grafting.

Superradical Surgery.—The question of what to do for a patient suffering from a presumably operable cancer of the breast presented no serious problem as late as ten years ago. Radical mastectomy with or without postoperative radiation was the standard and accepted procedure.

Today, this question finds itself in a state of utter and increasing confusion. Opinions of the experts vary all the way from simple mastectomy to radical mastectomy combined with resection of mediastinal lymph nodes, part of the chest wall and sometimes supra-clavicular dissection.

It might be well to ask ourselves—*what has given rise to this situation?* I think there are several factors: One is the improvement in technique and effectiveness of radiotherapy leading to the hope that this might make radical surgery unnecessary. Opposing this factor, is the recent trend toward superradical surgery for all forms of cancer but perhaps the underlying cause is the general dissatisfaction of the results of treatment of this very treacherous disease.

At this point I would like to dispose of the question of superradical surgery for mammary cancer. It is my own firm conviction that the current trend toward superradical surgery for cancer, in general, and for breast cancer, in particular, is a passing phenomenon.

Already, I find, an increasing number of (mature) experienced surgeons have voiced their dissatisfaction with the superradical trend.

Certainly some progress has been made and many patients have benefited from such procedures but as I see the over-all picture, much harm is often done in the failure to use good judgment in selecting candidates for extensive surgery. I think such errors stem mainly from a lack of personal experience with the natural history of the particular form of cancer under consideration and failure to appreciate the formidable differences in the behavior of the many clinical-pathological types of the disease.

Finally, there is the strange (and to me, unacceptable) attitude of justifying a tremendously radical surgical procedure with a high mortality and morbidity involving severe mutilation with only the very slightest hope of temporary help and almost no hope of cure on the basis that there is no alternative and that otherwise the patient will surely die.

In connection with this frantic effort to cure cancer at all costs let me quote Alexander the Great who in the year 323 said, *"I die by the help of too many physicians."* Paraphrased in 1957, this would read, *"I die by the help of too much surgery."*

If we consider some of the major forms of cancer which metastasize early and widely, of which mammary cancer is a classical example, there has to be a reasonable limit of operability and so, viewing the problem from a simple com-

mon sense point of view, I say, you cannot effectively keep chasing cancer cells with a mere scalpel beyond reasonable limits. Let me point out that advances in anesthesia and antibiotics permitting, as they do, longer and safer operations have benefited only a limited group of cancer patients, namely those with growths which remain relatively localized for considerable periods of time. Conversely, these advances have not altered, in the slightest degree, the ultimate prognosis of the overwhelming majority of the major forms of cancer in which widespread metastases almost certainly exist, when ultraradical surgery is considered.

The current practice of performing extensive surgical procedures, such as pneumonectomy for presumably single solitary metastasis is, I think, with rare and isolated exceptions, ill-advised.

William Halsted tried superclavicular dissection combined with radical mastectomy in 200 patients more than fifty years ago and gave it up; and Halsted was not exactly an amateur in this field.

With isolated exceptions radical mastectomy is the most extensive surgical procedure indicated for presumably operable cancer of the breast.

We now pass to the other extreme. *What results can we expect from the most limited surgery for breast cancer?*

Simple Versus Radical Mastectomy.—This leads us to consider the current controversy of radical mastectomy as against simple mastectomy combined with radio therapy as proposed by McWirther.

As we all know by now, McWirther quotes 42 per cent five-year survivals and 25 per cent ten-year survivals in 1882 cases of mammary cancer. These are, of course, impressive figures by an honest, competent observer. McWirther deserves much credit for this bold clinical experiment. At the same time, one must analyze all aspects of the problem carefully in an effort to evaluate the procedure and results.

At this point the writer is forced, reluctantly, into the painfully confusing realm of statistics.

As a medical student I recall vividly a remark of a favorite teacher, the late Dr. John M. T. Finney who followed the great Halsted as Professor of Surgery at Johns Hopkins. Dr. Finney and Dr. Joseph Bloodgood were friendly colleagues but differed drastically on certain procedures. One day Dr. Finney said to the students, *"Bloodgood has his statistics but I have my impressions."*

Untreated mammary cancer yields 20 per cent five-year survivals.

Halsted's introduction of radical mastectomy yielded him 40 per cent five-year survivals and 70 per cent in the group without lymph node invasion.

Daland's statistics in 1927 showed 22 per cent for untreated cases, 42 per cent five-year survivals with radical mastectomy—71 per cent when the axillary nodes were negative.

Since McWirther quotes 42 per cent five-year survivals by simple mastectomy, the problem reduces itself to a comparison of morbidity resulting from intensive irradiation as compared with axillary dissection. This must assume that both procedures are executed in skilled and experienced hands.

Personal experience leads me to say that a careful axillary dissection with observance of elementary surgical principles is remarkably devoid of ill effects. In my experience the rare cases of edema of the arm are invariably complicated by advanced disease along the axillary vessels and is not due to surgical trauma.

The loss of the pectoral muscles aside from the deformity does not lead to any real disability and has not interfered with those of my patients who have wanted to continue such sports as golf, tennis, and swimming. The same freedom from morbidity does not apply to extensive irradiation.

The performance of a correct axillary dissection is accompanied by far less morbidity than intensive irradiation.

I thoroughly approve of continued studies under proper conditions in an effort to further evaluate the more conservative procedure of simple mastectomy, but for the present, it would not be wise to depart from conventional radical mastectomy for presumably operable cancer of the breast.

The Cancer Process

Is it reversible? Certain clinical observations have intrigued me over the years and have raised questions in my mind as I am sure they have in yours. The reason for bringing these before you is that, little by little over the years, these phenomena have changed my conception of the disease and I am wondering whether you, too, have been impressed by what I shall now put before you.

Spontaneous Cures.—It is only in recent years that the writer has been willing to admit that spontaneous cures of proven cancer can and do occur and the medical literature increasingly supports this view. Frequently I have read about such occurrences with the greatest skepticism and disbelief but added experience has left no doubt of their occurrence and furthermore I believe that this event occurs much more often than we have hitherto realized.

Slowly Growing Cancers which, although untreated, last for many years are perfectly well known to all of us and require no further comment to this audience.

Dormant Cancers. There is increasing autopsy and operative evidence of gross and microscopic cancer foci which have lain dormant for many years.

Microscopic evidence of spontaneously regressing foci of cancer is accumulating. It is generally not appreciated that microscopic evidence of disintegrating cancer cells in the blood stream was demonstrated many years ago by Professor Muir of the University of Edinburgh.

Is there a Defensive Mechanism in Cancer? In the belief that an untreated cancer invariably pursues its relentless course to a fatal termination none of us have in the past been too impressed with any possible effective defense mechanism of the body against the growth but when we consider: (1) spontaneous cancer cures; (2) slowly growing and dormant cancers and all the other evidence of regressive phenomena, we begin to realize that a highly effective defensive mechanism must exist and that this mechanism may be playing a far more important role than has been generally supposed. The obvious reason for our distorted view of the cancer-patient relationship is that in this life and death struggle between the body and the invader, when the cancer wins, we see the disease in all its ugly and tragic forms. On the contrary, when the body wins, all traces of the struggle are usually lost, or at least are not conspicuous.

Perhaps one example might be the behavior of blue-black moles. Here is a patient who comes in with widely disseminated melanoma originating in a mole that has been quiescent for many years. Quite naturally all our attention and energy is focused on the clinical tragedy. Now let us consider the many years this mole was present before undergoing malignant change, or let us consider a similar mole that is still clinically benign. It is a curious fact that we are so concerned in trying to determine why the malignant mole changed that we hardly ever ask ourselves—*Why do most moles "stay put"?* Why do the myriads of so-called pre-cancerous lesions in our bodies remain under control—such as are found so often in operative, and especially in autopsy specimens, in all organs—especially the breast, thyroid, prostate and bladder?

The patient who is apparently cured for many years after nephrectomy for a malignant kidney lesion when the surgeon has cut across a cancer thrombus in the renal vein offers a classical example—as does the one with the cured thyroid carcinoma having known vascular invasion.

From all this it is perfectly clear that the body seems well able to control or destroy cancer foci and that its ability to do so is in all probability far greater than we have ever suspected. It is a strange fact that although this conception now seems perfectly clear, so strong has the theory of invincibility of the cancer cell become entrenched that this newer conception has hardly begun to enter the thinking of the medical profession and any adequate discussions of it in the literature are conspicuous by their absence.

It appears to me that in the so-called cancer process we deal with two opposing forces which operate throughout the lifetime of the individual—that what we see as clinical cancer represents the breakdown of the defensive mechanism in some organ. That in the non-cancer groups—e.g., patients who outlive clinical cancer, the defensive mechanism succeeded in holding down the abnormal growth, so that when the patient succumbs to other diseases or to accident, or old age, he dies harboring within his body "pre-cancerous" lesions or dies with undetected cancer. The longer the patient lives, the more likely he is to develop clinical cancer, and directly in line with this theory—when he does, it is usually a slowly growing cancer.

In rare instances the defensive mechanism which broke down and permitted clinical cancer to ap-

(Continued on Page 581)

The Benign Peptic Ulcer

The Need for a More Critical Analysis

By M. W. White, M.D.
Detroit, Michigan

THERE IS an urgent need for a more critical evaluation of the benign peptic ulcer problem. The merit of current therapies, medical or surgical, are not consistently satisfactory. Despite careful use of improved anticholinergics, non-hyperalkalemic, non-constipating, non-renal-calculiforming alkalizers and despite dietary observances, et cetera, medical management is not predictably certain of curability. Surgery does not answer the entire problem either because of the many postoperative complications and morbidities. In addition, recurrence of the ulcer may develop postoperatively.

We, as active practitioners, cannot deny the fact that despite advances made in this era of medical progress, the peptic ulcer, gastric or duodenal, still remains one of mankind's most notorious maladies in terms of chronic distress, complications, recurrence and morbidity.

Inconsistent with the guarded prognosis of a peptic ulcer case is the rather consistent acceptance of the prevailing theory of gastric hyperacidity as a major factor in the pathogenesis of the benign ulcer. This hypothesis has continued to influence our thinking throughout the past thirty years despite the multi-variety of existing therapies. In fact, the literature is so abundant in varied and conflicting articles that it is almost humanly impossible to review them all. The theory of gastric hyperacidity tenaciously controls the medical profession's thinking when failure in therapy is rationalized as patient carelessness or neglect. On many occasions the responsibility is transferred to the psychiatrist, blaming increased acidity on cephalic overstimulation.

The surgeon is likewise anxious to blame his failures or morbidities on other factors; psychoneurotic patient, recurrent symptoms merely gastritis now, insufficient stomach removed, et cetera. For a while, exhuberant surgeons were doing almost total gastrectomies, but because of the increased morbidity and poor results, this procedure has recently been abandoned. At present, unprecedented numbers of gastric resections are being performed throughout the continental United States in treatment for the gastric and duodenal ulcer. It is not unusual to read articles reviewing anywhere from 500 to 1,000 resections performed by one particular individual or clinic group. If it were possible to total the exact number of resections done for the benign ulcer during the past five years the results might well be astounding.

Surgery is certainly necessary for life-saving indications. One must open-mindedly question, however, whether such quantities represent surgical emergencies or elective recommendations, the latter being a means of removing the acid producing portion of the stomach since presumably, medical management has failed. Recently, surgery too has been urgently advised and undertaken for most gastric ulcer cases that do not respond promptly within a six-week medical regime. The suspicion that prevails is that such an ulcer might be malignant and it is better to resect than to overlook one case. Out of 100 gastric ulcers surveyed by J. H. Geddes,[1] thirty cases were resected and only one was found to have a carcinoma. With a surgical mortality rate of 3 per cent and a morbidity rate of 10 per cent, he felt that definitive treatment should be more individualized.

No destructive criticism is intended either to the surgeon or internist. Patients would certainly not commit themselves to surgery were they not chronically in distress or recurrently ill. The intent is merely to stimulate and to organize our thinking in order that we might re-evaluate the validity of the theory of gastric hyperacidity as the pathogenic factor in the production or continuity of the benign gastric or duodenal ulcer.

It is possible that hyperacidity may play a role in the pathogenesis of the peptic ulcer but apparently it is not a consistent one. Many studies have shown a definite increase in gastric acidity in association with an existing peptic ulcer. Other studies, however, show that no increase in acidity was noted. In 1946, Dr. David Sandweiss and

associates[2] reported the results of a study which indicated that there was no significant difference in the volume and total output of acids (of normal gastric secretions) between the normal human subjects and the patients with uncomplicated duodenal ulcer as studied by continuous suction. Many others have agreed with such findings in their studies of gastric secretions. The dictum "no acid, no ulcer" cannot be substantiated. It is difficult to discard such a rational theory of gastric hyperacidity but the theory does not fit the facts and in the light of our many therapeutic failures we had better, it seems, search for other factors.

If factors other than hyperacidity are involved in the pathogenesis of the benign peptic ulcer, how can we isolate them? If anti-acid therapy has been so effective in many instances of peptic ulcer cases, how can we disregard its value? Let us consider the second question first and return to the first one later.

Many authorities have stated that 85 per cent of those developing peptic ulcer heal spontaneously or do so with some form of therapy. About 15 per cent continue on to the chronic recurrent phase. How exact these figures may be is difficult to determine. Assuming that they are somewhat close to being accurate, it would appear that approximately five out of every six cases heal regardless of, or because of, some form of therapy. It is conceivable that in this instance anti-acid therapy, being the most common form of therapy may, coincidentally, be credited with the many apparent successes.

Other reasons exist that again create an illusion of successful anti-acid effectiveness. Most textbooks, for example, describe the symptoms of peptic ulcer as being associated with periodic occurrences of post-prandial pain, discomfort or gnawing pains which are relieved by food or soda. Epigastric nocturnal pains which awaken the patient in the early hours of the morning are likewise indicative of the presence of an ulcer. A high percentage of these ulcers are concomittantly associated with symptoms of indigestion, as for example, gastric distention, nausea, belching, cramps, and intestinal distention with excessive passage of flatus.

It is on this basis of pain-alkalizer or food-relief that continued beliefs are maintained about the acid-ulcer relationship. Disturbing to such theoretical relationship, however, is the fact that in many instances of proven peptic ulcers, foods or alkalizers do very little good; in fact, they often aggravate the condition. Then, too, there are individuals who have no pain yet suddenly perforate or hemorrhage. Another serious consideration is the fact that many functional disorders duplicating, or in association with, an ulcer are relieved with alkalizers, food or anti-cholinergics, et cetera. One cannot help wondering whether such glowing cures described in the literature represent the 85 per cent who resolve spontaneously or are relieved of the functional symptoms that are associated.

Another source of misinformation about the peptic ulcer is the factor of diagnosis. Symptomatology alone is insufficient to establish a diagnosis. Without corroborating x-ray evidence the diagnosis is not valid. Too many typical ulcer prodromata in patients are found to be negative despite repeated x-rays in years of follow-up care. One positive x-ray finding is not positive proof either that an ulcer is present, even if there are associated symptoms. In my own experience I have had a number of occasions where ulcers, either gastric or duodenal, were found to be present by a reliable radiologist, yet subsequently proven incorrect. In one instance, a gastric ulcer was reported after a barium meal. The patient, quite distressed, promptly went to a well-known clinic, out of town where such x-ray evidence was not confirmed. In two other cases, duodenal ulcers were reported. These individuals received no specific therapy for one reason or another, yet x-rays repeated several weeks later failed to identify the earlier ulcer. How easy it might have been to credit the prevailing therapy, if it had been given, for an effective cure. Relief of symptoms by alkalizers, anti-cholinergics, spontaneous or early resolution of approximately 85 per cent of ulcer cases, curability based on one x-ray diagnosis, have aided and abetted the continued acceptance of the theory of hypergastric acidity as the big factor in the pathogenesis of the benign ulcer, despite the many therapeutic failures both medically and surgically.

The average physician is keenly concerned with the truth of a disease but is oftentimes bound down with statistical information rather than factual knowledge. Information is the intermixing of facts and opinion. It is often loaded with fallacy and misinformation. Such is the existing

situation today whereby too many highly esteemed men write and record statistical analyses as positive proof of superiority or inferiority of one procedure over another. These statistical studies compounded by various releases of confusing information contribute to the misunderstanding of the benign peptic ulcer problem.

We practioners, constantly alert to provide the best possible care for our patients, cannot be guided by statistical information alone. It is important that the true facts be ascertained. If the theory of hyperacidity is not tenable, what factors then are involved? There is an old adage, repeatedly quoted and applied by men who have made history in medicine in their time, "To seek the truth in disease, seek its pathology."

In the past years it was rather difficult to obtain enough specimens for pathological study. Acute or chronic peptic ulcers seldom ended on the morgue table. In recent years, however, the surge in resections has provided ample material for study. Consequently, the author has reviewed 100 stomachs which had been resected for duodenal or gastric ulcer. Malignancies were not included. Some authors have recorded reviews made of 100 to 600 resected stomachs in previous studies. Their results will be evaluated along with our own.

The findings in fourteen resected stomachs are listed below. They list an outline of the diseased tissue as recognized by the pathologist. When pertinent, both microscopic and gross pathology is included in the outline. Each one of the fourteen cases has something significant. The balance of the hundred cases are duplications and are consequently omitted.

The following stomachs were resected because of an existing duodenal ulcer:

1. Duodenal bulb was deformed, showed numerous periduodenal adhesions and inflammatory bands. The stomach wall mucosa was entirely normal. There was no evidence of mucosal changes of any kind.

2. Stomach mucosa showed no abnormal changes. Microscopically there was an increase in the number of parietal and chief cells to show active cellularity and secretory activity.

3. Grossly, the stomach mucosa was finely cobblestoned. Distal end revealed several superficial ulcers on anterior and posterior walls. Microscopically, the mucosa showed hypersecretory activity and minimal inflammatory changes.

4. Grossly, there was a posterior wall ulcer penetrating to the pancreas (this was the description given on the operative report). The submucosa, according to the pathologist, was quite edematous. Microscopically, the mucosa was infiltrated with chronic inflammatory cells and no prominence of the chief and parietal elements.

5. The mucosa was infiltrated by considerable numbers of lymphocytes. The chief and parietal cells were minimal in number and there was no suggestion in the stomach mucosa to show hypersecretory activity.

The next group of stomachs were resected because of a gastric ulcer:

6. Grossly, the serosa was smooth, grey and glistening. Layers of walls about the ulceration were hypertrophic and well-defined. The mucosa was edematous. Microscopically, there was mild intestinalization of the mucosa, no prominence of parietal cells and numerous masses of lymphocytes. The muscularis was densely infiltrated by eosinophiles and chronic inflammatory cells.

7. Grossly, the anterior wall was not remarkable. The posterior wall was considerably edematous. Mucosal surface showed sharply, punched-out, irregularly round ulceration. There was extensive inflammatory change throughout the omental fat next to the serosal layer. Microscopically, fibroblastic infiltration of wall with chronic inflammatory cells was seen. The mucosa showed intestinalization.

8. The mucosa was overlaid by blood-tinged mucus. No ulceration was found. Microscopically, however, mucosa was characterized by a chronic gastritis with fibrosis of submucosa and hypertrophy of muscularis.

9. Grossly, the serosal surface was smooth, surrounding tissue showed fibrosis and an area of ecchymosis. Microscopically, we saw an ulcerated lesion lined by necrotic debris, active granulation tissue, fibrosis of wall with complete absence of musculature.

10. The microscopic analysis of this stomach showed an ulcer covered by pus cells and a pyogenic membrane over the crater. The adjoining mucosa showed metaplasia but no evidence of inflammation or irritation.

11. The microscopic examination of this stomach reveals a severe chronic inflammatory reaction of purulent membranes and granulation tissue lining an ulcer crater.

12. Considerable edema of the mucosal wall underlying the ulcer area was noted. The remainder of the mucosa appeared hyperemic. Microscopically, the ulcer base is covered with a necrotic cellular debris and leukocytes. Beneath this is an area of fibrosis including many fibroblasts and newly-formed blood vessels. The muscularis is interrupted indicating perforation.

13. Grossly, there was a sharp punched-out deep ulcer with necrotic base. The surrounding mucosa was hyperemic. Microscopically, there was a normal mucosa ending abruptly at the ulcer crater. The latter was filled with mucus, blood and chronic inflammatory exudate. Inflammatory changes extended throughout the wall. The deeper arteries showed marked thickening of the wall and in places, obliteration of the lumen. Severe chronic inflammation was seen in the adventitia and some eosinophiles were seen about some of the vessels.

14. Grossly, a severe inflammatory and congestive type of mucosa. No evidence of ulcer. Microscopically, the mucosa showed a number of lymphocytes, muscularis showed numerous inflammatory cells with perivascular distribution.

Summary of Findings

Mucosa.—The mucosa of the stomach is practically normal in the presence of some duodenal ulcers. The mucosa of the stomach shows extensive inflammatory reaction in association with some duodenal ulcers. The mucosa of the stomach shows very little inflammation or irritation beyond the walls of some gastric ulcers. The mucosa of the stomach reveals extensive irritation and inflammatory reactions beyond the ulcer bed of some gastric ulcers. The mucosa shows extensive inflammation and irritation but no ulcer, gastric or duodenal could be identified after resection.

Chief and Parietal Cells.—Marked increase in chief and parietal cells and activity is noted in association with some duodenal ulcers. Minimal or active chief and parietal cells were noted in association with other duodenal ulcers. Active chief cells in association with gastric ulcers was noted in several cases. Minimal or no chief cell activity was noted in other gastric ulcer resected stomachs.

Serosa.—Paraduodenitis including inflammatory area into the pancreas was described. No areas of perforation were recognized in the muscularis or serosa of the diseased tissue. There is also a perigastric serosal irritation and inflammation involving the omental fat and lymph nodes. The muscularis and the serosa, however, were not perforated. Perforation was noted in several cases. The surrounding organs and tissues were irritated and inflamed. In one case the posterior wall was edematous with swelling and perforation. On the anterior wall there was none or little inflammation.

Other Significant Microscopic Findings.—Lymphocytic cell infiltration consistently present. Eosinophilic cell infiltration in a number of cases. Necrosis, a common finding, present in the center of the ulcer. Obliteration of arterioles at periphery was consistently associated; endarteritis obliterans. Pus exudate in ulcer crater and pyogenic membrane in surrounding areas. Edematous tissue in ulcer bed and in surrounding areas. Fibroblastic activity increased as evidenced by marked fibrosis or scar tissue formation.

Other Studies.—Magnus[3] studied 600 cases. His conclusion was that atrophy of the glandular parenchyma of the gastric mucosa was the main consistency. European investigator, Alfonso DeLaFuentaChoas,[4] of Madrid examined 243 specimens by perfusions with Neoprine (India Ink) and proved a zone of intense ischemia about the ulcer. Microscopic sections showed the existence of lesions similar to "endarteritis obliterans." The arterioles were all occluded but the veinules were dilated and occupied with red blood cells.

Comment

1. The benign peptic ulcer, gastric or duodenal may exist in a limited area without involving the surrounding mucosa to any degree. It is thus possible for the mucosa of the stomach or area surrounding the ulcer to be free of irritating reactions.

2. The benign ulcer, gastric or duodenal, however, may be associated with extensive areas of inflammation (gastritis) involving wide areas of gastric mucosa.

3. Several cases showed that despite an intact muscularis and serosal layer inflammatory actions extended into the omental fat where a gastric ulcer prevailed and into the pancreas where a duodenal ulcer existed.

4. The chief and parietal cells in numerous stomachs were entirely absent or showed very little activity despite the fact that extensive gastritis or ulceration and necrosis were present. On the other

hand, several stomachs showed increased chief and parietal cell activity.

5. A number of stomachs, despite careful study, revealed no evidence of an ulcer but extensive inflammation of the gastric mucosa (gastritis).

Based on the above findings, it seems to me that gastric hyperacidity can no longer be acceptable as an important factor, alone, behind the pathogenesis of the benign peptic ulcer. Although the chief and parietal glands showed increased activity in some stomachs, there were others where the glands were normal or atrophied. Then, too, perigastritis and periduodenitis involving the omental fat or the pancreas was noted, despite the intact serosal layer of the stomach or duodenum. In some instances where perforation of the muscularis and serosal layer was recognized there was no extensive involvement of the stomach mucosa beyond the ulcer bed to any appreciable degree.

Is gastric acid strong enough to perforate through muscles and serosa and yet too weak to inflame or irritate the mucosal layer alongside the ulcer bed? Is gastric acid capable of penetrating intact muscularis or serosa, yet too weak to involve extensively the mucosa alongside the ulcer bed? The theory of hyperacidity is not tenable; it does not fit the facts. For accuracy we must look elsewhere. Let us evaluate, therefore, the significant microscopic findings that are present in most of the resected stomachs.

1. *Lymphocytic infiltration.*—Nearly all of the stomachs resected showed vast infiltration of the lymphocytes around the blood vessels, ulcer bed and especially in the mucosa where gastritis was associated. Lymphocytes usually indicate a chronic inflammatory reaction. The latter may arise, however, not only from chemical or burn irritants but also from bacterial invasion. Bacterial infection, primary or secondary, specific or non-specific cannot be overlooked in relationship to the peptic ulcer. The existence of pus and pyogenic membranes in a number of resected stomachs indicates bacterial involvement. Of course, aseptic material as croton oil, turpentine, gastric acidity (?) may produce suppuration, but in the light of the limited area of ulceration, penetration posteriorly or anteriorly to surrounding organs, spread through the lymphatics, it would seem unwise to overlook bacterial involvement.

2. *Eosinophilic cell infiltration.*—A number of cases revealed extensive eosinophilic infiltration. These cells usually indicate an allergy or parasitic reaction.

The amoeba and other parasites may penetrate the mucosa of the stomach to produce a gastric ulcer. This brings to mind a former U. S. Navy WAVE whom I examined a number of years ago. Her past history involved a gastric resection because of hematemesis. Later, it was found that she was infested with *Amoeba histolytica.* This parasite might very well have been behind the gastric ulcer and hemorrhage.

Histamine reactions to allergic sensitivities to foods, et cetera, must be considered also as a factor in the benign ulcer syndrome. Walter Alvarez[5] clearly demonstrated that a large percentage of gastric disease arise from certain food allergies. This was exemplified by discussion of a case in which a woman went into shock following ingestion of Roquefort cheese hidden in a salad dressing. He convincingly proved many instances of gastric distress cleared simply by withdrawing such offending foods, when identified, from the diet. Certainly with such clinical and pathological findings, inflammatory histamine reactions in the gastric mucosa caused by food allergy cannot be overlooked as a factor in the peptic ulcer problem.

3. *Necrosis.*—Necrosis has been such a common finding that it too cannot be overlooked as an important factor in the etiology or perpetuity of the peptic ulcer. Necrosis indicates ischemia. Microscopic examination revealed many instances of endarteritis obliterans, yet venules were loaded with red blood cells. Apparently, the fibrinoplastic foreign protein, debris, closure of the arterioles (in consequence to the original assault, whatever it might have been) prevented the flow of arterial blood. This eventuates in a failure to permit complete healing.

4. *Edema.*—The mucosa was in most cases edematous, involving the ulcer bed and surrounding mucosa and submucosal tissues. Edema arises from inflammatory assaults. It is also associated with Na^+ or Cl^- retention. Hypoproteinemia may be a factor too. These facts must be included in any considerations for overcoming edema along with the inflammatory factor or factors.

5. *Cicatriazation.*—Large numbers of fibroblasts

and scar tissue cells, were noted in many of the cases. Scar tissue is formed but somehow granulation and complete healing does not occur. All factors involved in the healing processes of tissue reliable. The theory has been promulgated through the years by incorrectly crediting cures when spontaneous healing, incorrect x-ray evidences, functional disorders, hypermotility or spasticity were

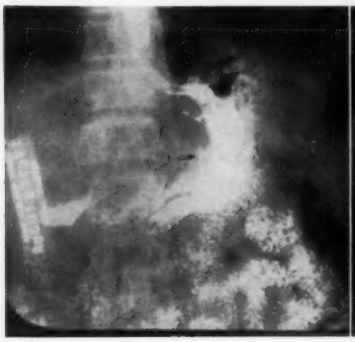


Fig. 1. Profuse hemorrhaging (December 27, 1956).

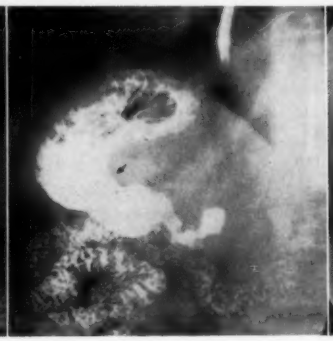


Fig. 2. Recovery satisfactory twelve days later (January 8, 1957).



Fig. 3. Recovery complete at approximately six weeks (February 16, 1957).

must be considered. Any deficiencies in existence, for example, vitamin C deficiency, hypoproteinemia, ischemia, et cetera, must be corrected for complete healing to take place.

Report of a Case

A man, aged fifty-four, was admitted to the hospital in a state of acute intoxication. History of alcoholism was a long one. He also had other illnesses (chronic bronchial asthma and myocardial damage). He responded well to medical therapy, both for the alcoholism, asthma and myocardial weakness. On the fourth day, however, he became nauseated, vomited about a pint of bright red blood and became almost pulseless. Heroic measures, including blood transfusions, restored the patient to physical stability. On questioning, it was learned that he had felt some burning pains in the epigastric area but believed that these pains were related to his asthma and therefore did not mention them. Palliative therapy was instituted with the belief that the bleeding might be from bleeding varicies of the esophagus. The cephalin flocculation test and thymol turbidity tests were negative, therefore a rapid stomach survey with diluted barium was conducted and a large gastric ulcer was demonstrated. He had several other hematemeses; however, conservative management was indicated because of his complicating illnesses. Therapy was instituted and directed at alleviating the five factors which were listed above. His recovery was satisfactory. His ulcer healed completely as demonstrated by the following x-ray studies (Fig. 1-3).

Summary

Acceptance of the theory of gastric hyperacidity as the sole factor behind the pathogenesis of the benign gastric ulcer is no longer, in my opinion, involved. It is also relatively impossible, with present-day diagnostic methods, to determine accurately the factor or factors involved in promoting or perpetuating a chronic benign gastric or duodenal ulcer in any one specific case. It would seem rational, consequently, to treat all resistant cases utilizing every method known to combat the five factors involved in the peptic ulcer, as recognized by the pathological studies, in an almost routine manner.

The factors as discussed include: (1) chronic bacterial infection—primary or secondary, (2) allergic or parasitic reactions, (3) fibrinoplastic (endarteritis obliterans) ischemia, (4) edema (Na^+ and Cl^- retention), (5) faulty healing (hypoproteinemia, vitamin C deficiency, et cetera). Each must be effectively irradicated if consistent and good results in the control of the benign gastric or duodenal ulcer is desired.

References

1. Geddes, J. H., Sonn, W. N., and Taylor, J. A.: Gastric ulcers; Review of 100 cases. Canad. M. A. J., 75:550-554 (Oct. 1) 1956.
2. Sandweiss, D. J., and Sugarman, M. H.: Medical aspects of peptic ulcer. Rev. Gastroenterology, 19: 271, 1952.
3. Magnus, H. A.: Modern trends in gastroenterology. J. Path. & Bact., 44:389, 1937 and 58:431, 1946.
4. DeLaFeuntaChoas, Alfonso and Dominques, Jose Luis Puenta: Abst. of Obst. Surg. & Gynecol., 2:3 (April) 1957.
5. Alvarez, Walter C.: Functional diseases of the stomach and colon. M. Clin. North America, 37:12 (Jan.) 1953.

Pathology and Treatment of Urethral Caruncles

By Harold D. Dykhuizen, M.D.
Muskegon, Michigan

VERY LITTLE has been written or stressed recently concerning the very common lesion of urethral caruncle. However, a great deal of variable thinking as to the symptomology and treatment still exists.

Some twelve years ago, because we were dissatisfied with our results using electrocoagulation (owing to inadequate removal and stricture formation) a review of the literature was made preliminary to the study of our cases. This study has since been continued.

It became quite clear that a routine for the study of diagnosis and treatment of a caruncle depended upon understanding the true pathological picture of the various types, the careful study of the urinary and genital tracts, and using a systematic approach for removal, to satisfy the three principles set forth by Everett in his textbook.

In recent years, it has been pointed out that there are an increasing number of unsuspected and pre-malignant cases found when performing adequate removals and submitting them for biopsy. The older articles and texts stressed the gross pathological appearance which I feel is most important to effect complete removal. No mention will be made, here, of the incidence, age, or etiology. The former is well known, and the latter is unknown.

In 1914, Kelly and Burnam pointed out that the term "caruncle" is an unfortunate one since it means nothing more than "a small fleshy mass," and that this has accounted for the inadequate approach. They suggested that V. Winchel's term, "papillary polypoid angioma," would be more complete and descriptive. No mention of this term is made in recent literature, but I believe it emphasizes the extensiveness the lesion may take.

The angioma may be sessile or pedunculated, or a multiple of each. The tumor is generally markedly red and extends into the urethra for some distance. The general mass seems to protrude or originate from the posterior wall mucosa, although if multiple polypi are present, they may come from the lateral walls. The sessile type is most prominent on the posterior lip, but may surround the entire meatus and seem localized there, but, if carefully examined, the base always extends *into* the urethra. Walther emphasizes the need of over-dilatation of the urethra in order to fully visualize the entire tumor. We feel that eversion of the urethra is also important to well-define the base.

Occasionally, the polypoid masses are accompanied by a prolapse. Differentiation between caruncle and true prolapse is not difficult.

Walther and Willoughby, Hess, Counsallour, and others have stressed the difficulty, by clinical means, of differentiating a benign and malignant lesion.

Everett describes the microscopic appearance as fairly consistent, appearing as polypi with a loose fibrous stroma containing many thin-walled blood vessels and usually infiltrated with inflammatory cells, round cells, and polymorphonuclear leukocytes. The surface is covered by stratified squamous epithelium or by transitional epithelium in about equal proportions of the cases (Olcott) and occasionally both types are present in the same specimen. The epithelium often tends to dip down into the stroma forming crypts with resulting patterns which, on cursory examination, might suggest carcinoma. At times, the structures are typically papillomatous.

The older text books have stressed the exquisite sensitivity of all caruncles and this impression of the symptomology has persisted in many minds. However, we did not find this to be true except in the very large polypoid masses or those with ulceration. Most angiomas seen are insensitive and produce little or no symptoms. Therefore, it must be stressed that, although a caruncle does exist, frequency, urgency, and dysuria must be thought the result of urinary tract disease other than of the obvious lesion found on superficial examination.

Presented at the Michigan Clinical Institute, Detroit, March 15, 1957.

The most prominent symptoms of a caruncle, as an entity, is bleeding—particularly that found on tissue after wiping. Along with this, is the above-mentioned mild to extreme sensitivity. This bleeding must be differentiated from vaginal or uterine bleeding.

In the past twelve years, 118 cases were operated and another twenty-one cases seen because of incidental findings on urinary tract examinations. The majority of the 118 cases were referred or seen for a primary diagnosis of caruncle. Of these: 34 per cent had associated urinary tract disease including five cases of ureteral calculi and six having interstitial cystitis; 29 per cent had chronic urinary tract disease, and 5 per cent had acute infections. The remaining were seen with bleeding and tenderness. One huge polypoid angioma (1 inch in diameter) was removed. Another was ½ inch in diameter, projecting from the meatus with a small pedicle orginating ⅜ of an inch in the urethra. One other case had multiple large ulcerated polypoid masses. One was indurated and ulcerated but on a small soft base. Malignancy was suspected, but microscopically the many vessels were thrombosed.

These cases illustrate the necessity of a diagnostic procedure to study the genitourinary tracts In each case, a physical examination is done, followed by cystoscopy, palpation of the urethra with cystoscope in place, careful vaginal and pelvic examination, and urinalysis with culture. Pyelograms may be done if findings warrant. If other conditions are present, these are treated preliminary to excision of the caruncle.

Various techniques have been suggested for treatment, including dissection, excision with loop electrode, destruction with chemicals, or actual cautery, fulguration, or a combination of these methods.

The three important principles to follow in technique are:

1. Sufficient amount of tumor should be removed and preserved for microscopic study.

2. The mucous membrane at the base must be completely removed or destroyed to prevent recurrence.

3. The removal or destruction must be done in such a way as to avoid scarring sufficient to produce a stricture.

The use of chemicals must be discontinued. Destruction with electrocautery or fulguration is too apt to leave scarring and does not provide tissue for biopsy. Furthermore, it is difficult to ascertain the amount of tissue necessary to destroy as the appearance changes rapidly under even minimal dessication.

Walther and Willoughby, in 1935, came to the following conclusion:

> "The many reports received in personal communications from leading urological clinics throughout the country, as well as a study of the series herewith reported, reveal the fact that many of the proliferative lesions of the female urethra removed and studied microscopically show either malignant or pre-malignant changes. A warning should therefore be sounded against removal of such lesions by haphazard methods often employed (actual chemicals and so on) without submitting biopsy specimen to the pathologist in every instance. It is only by routine study that the actual incidence of urethral carcinoma in women can be determined."

Walther, in 1943, advocated excision with the loop electrode at the base of the polypoid type. Many have advocated excision with coagulation of the base for bleeding. This can be done without scarring on a very small base, but an extensive sessile lesion requires enough to cause serious scarring later.

To overcome some of these objections and to fulfill the principles laid down for adequate removal, the following technique has been used.

All patients are hospitalized and sodium pentothal used as an anesthetic. Local anesthetic was discontinued because it distorted the field, making the tumor base difficult to define. We also desire to have the patient completely relaxed. No colored antiseptics are used in preparation but rather aqueous green soap or surgical detergent to keep the normal tumor color outline.

The labia are held apart by an assistant. The urethra is observed closely and dilated with a 28F sound. On several occasions, a film of tissue covering the meatus was excised previous to dilatation. The components of the angioma are then grasped with Allis' forceps or traction sutures and drawn outward. If this does not sufficiently illustrate the entire base, further eversion of the urtheral mucosa at the meatal end is accomplished. Taylor advocates the use of a Foley bag catheter pulled down to help evert the meatus. After the entire base is well-defined, excision of the tumor is started in normal mucosa at the meatal end, by circumscribing the urethra. With the traction gentle, but constant, the urethral

mucosa with tumor is dissected along the longitudinal muscle beyond the base and then excised with either scissors or knife. This procedure may de-nude the distal ½ inch of wall of the urethra. Bleeding is mainly at the proximal end and may be controlled with a 24F Foley bag catheter, indwelling for twenty-four to thirty-six hours. However, in the past five years we have followed Roen's suggestion of suturing the mucosa to the meatus. In no instance has this failed to control the bleeding nor has it caused any irritation or scarring. Occasionally, on small lesions, a tiny piece of gauze, saturated with topical thrombin, controlled the oozing. At times, edema at the incised mucosal border causes difficulty in voiding and a small indwelling catheter is necessary for twenty-four to forty-eight hours.

Between June 1944, and January 1957, 118 cases have been treated in this manner. The healing has been surprisingly rapid, giving the patient no discomfort. There has been very little serosanguineous drainage and no secondary bleeding which is seen where fuguration or coagulation of the base is done. Five strictures developed. However, in the remaining cases the meatus was normal and pliable. In six cases there was a recurrence. In another, the microscopic report showed an early malignant change. The patient has been watched for eleven years showing no recurrence in induration or extension and it is felt that the excision was thus adequate.

All patients have been released from the hospital the third or fourth day and have been up and around thereafter. Any pyuria has been controlled with small doses of sulfonamides.

It is felt that a renewed emphasis should be made on the clinical-pathological picture of the papillary polypoid angioma in order to correlate it with more adequate removal of the tissue involved. This is warranted as more early and premalignant changes are found in the biopsies. Emphasis should be made on thorough genitourinary tract examination as a great many are urinary tract diseases with an incidental angioma.

Summary

One hundred and eighteen cases have been treated with the suggested total excision using indwelling catheter or suture for the control of bleeding. There was prompt healing with few strictures and only six recurrences. One case of early malignancy was found eleven years ago, the excision of which was adequate for cure to date. The procedure is short, thorough, and fulfills the principles advocated for adequate treatment.

We have taught people to heed the warning of blood. Therefore, any spotting is terrifying to the medically-conscious woman and even though one may minimize the caruncle as a lesion, the patient rightfully deserves to have her fears allayed by thorough removal and biopsy after careful examination to localize the source as a caruncle.

CANCER OF THE BREAST

(Continued from Page 572)

pear for some unexplained reason reasserts itself and the lesion remains dormant or even regresses and disappears spontaneously.

Now the question is: *Can we derive any practical help from this new "look"?*

Adequate recognition of the importance of the defensive role of the body against cancer opens new and hitherto unexplored avenues of research which should lead to a better understanding of the cancer process. The question that naturally follows is what can be done to strengthen the natural defenses. Hitherto, almost all our energies have been spent on attempting to remove or destroy the cancer and surprisingly little has been done to help the body mechanism. It is not over-optimistic to hope that a reorientation of our attack on the cancer problem with proper emphasis on augmenting the body defense might open a new era in cancer research. Already some progress has been made in this direction in the discovery of certain chemicals and hormones which have exerted a favorable effect—and the most recent studies of the possible role of the emotions, acting through the hormones on the cancer process, are especially interesting and give some hope of progress in a totally new and exciting field of research.

Thorazine Jaundice

By Kirk V. Cammack, M.D.,
John W. Hoffman, D.M.D., M.D.
and Max Dodds, M.D.
Flint, Michigan

ONE OF THE most important problems confronting the surgeon is the differentiation between surgical and non-surgical jaundice. The surgeon relies most heavily upon the laboratory in helping to solve this diagnostic problem. Microscopic examination of a liver needle biopsy is a more recent aid.

There are certain hepato-toxic chemicals which have produced a picture of obstructive jaundice, both clinically and in the laboratory.[1,2,3] The most recent and extensively used of these drugs is chlorpromazine (thorazine).

There are approximately two million people in the United States receiving or who have received this drug since its recent introduction.[4] It is estimated that possibly 2 to 3 per cent of these people develop jaundice. A surgeon in an active practice will be apt to see these jaundiced patients in consultation. He must be aware of the fact that chlorpromazine produces a jaundice indistinguishable by the commonly used laboratory tests from obstructive jaundice. The liver biopsy also suggests an obstructive process.

The purpose of this paper is to present two cases of thorazine jaundice in which surgery was performed with disastrous results and to construct a clinical picture of the patient most likely to develop this type of jaundice. A review of the literature will be attempted.

Review of Literature

Clinical Data.—We have selected from the literature twenty-one cases reported in sufficient detail to be of value in the synthesis of a clinical picture (Table I). These cases include eight men and thirteen women, the average age being fifty-one years, with a range of from twenty-one to seventy-two years. In most cases, the indication for the use of thorazine has been psychogenic diseases. These factors of sex distribution, age distribution, and indication are probably a reflection of the population receiving thorazine therapy. The associated conditions do not appear significant. The dosage of thorazine ranged from 20 to 660 mg. daily, and the total amount received ranged from 525 mg. to 14.52 grams. It would appear from this that the development of jaundice is not dependent on the amount of thorazine received.

In the typical case, there is a period of about fifteen days after the beginning of thorazine therapy preceding the premonitory signs or symptoms. These latter usually include fever of 100° F. to 103° F., malaise, anorexia, and sometimes chills. There may be nausea and vomiting, and pruritus may appear prior to the jaundice. The prodromal period may be as short as four days or long as twenty-one days.

Jaundice appears about five days later, but may appear as early as the day following the prodromal signs or symptoms or be delayed as long as fourteen days. In almost all cases there are clay-colored stools, an enlarged tender liver, and there may be exacerbation of the prodromal symptoms with increased malaise, nausea, and vomiting. Pruritus usually accompanies the icterus, and may be severe and intractable. The jaundice lasts about six weeks (two to seventeen weeks) and the hepatic dysfunction a week or so longer.

In Cases *14* to *18*, inquiry as to past history of allergy was made. Two of the five patients had a previous history of allergic dermatitis, and the authors reporting these cases attached some significance to this datum. Past history, with specific reference to allergy, is not available in the remainder of the published case reports.

Laboratory Data.—In the usual case, the white count is normal or slightly elevated. In about half of these cases in which the differential is reported, there is eosinophilia from 5 to 58 per cent (the tendency towards eosinophilia, in view of the previously mentioned allergic background of some of these cases would appear to be a significant feature of the syndrome). The serum bilirubin has been reported in twenty of the twenty-one cases. In all there has been significant elevation

Presented before the Michigan Chapter of the American College of Surgeons, Ann Arbor, March 12, 1957.

TABLE I. REVIEW OF THE LITERATURE—CLINICAL DATA

Case Number	Reference	Age and Sex	Diagnosis or Indication	Associated Condition	Dosage, mg				Days Until Premonitory Signs	Premonitory Fever	Days Until Jaundice	Clay-colored Stools	Duration of Jaundice	Duration of Hepatic Dysfunction	During Jaundice		
					Minimum Daily	Maximum Daily	Average Daily	Total							Rash	Fever	Liver Edge
1	5	46M	Psychogenic disease	None			200	2800	14		15	Yes	14	30	No	102	No
2	6	45F	Psychogenic disease	Mitral stenosis		500		10000	4	101	21	Yes	91	91	No		Yes
3	7	70F	Psychogenic disease	Diabetes			225	975	9	103	13	Yes	39	43	No		Yes
4	8	64F	Psychogenic disease				75	525			14	Yes	77	77	No		
5	8	36M	Meniere's disease		20	100			19	101	26	Yes	90+	90+	No		Yes
6	8	47F	Psychogenic disease	Herniated disc			150	950	21	100	26	Yes	14	14	No		Yes
7	9	40F	Psychogenic disease				200	2800			14	Yes	30	30			Yes
8	10	70F	Psychogenic disease					3875	19	102	21	No	14				
9	11	67F	Dermatitis, pruritis	Lymphatic leukemia?			50	1050			31		14	14	Yes	104	Yes
10	12	65F	Psychogenic disease	Diabetes		200		3360			23		117	117	No		No
11	12	65F	Nausea, vomiting		100			1350			15	Yes	85-108	85-108	No		No
12	12	59M	Psychogenic disease	Chr. encephalitis?		50		1520			31		55	55		100	Yes
13	13	52M	Psychogenic disease					1500	10	Yes	19	Yes	73+	73+		102	No
14	14	21F	Psychogenic disease		200	300	210	1680			8		14-21	14-21			
15	14	22M	Psychogenic disease		100	200	123	2031			17		14-21	14-21			
16	14	30M	Psychogenic disease		150	200	160	3360			21		14-21	14-21			
17	14	34F	Psychogenic disease		150	1000	660	14520			22		14-21	14-21			
18	14	43M	Psychogenic disease		200	800	320	6400			20		14-21	14-21			
19	15	65M	Psychogenic disease	Recurrent bronchitis			75	1425	19	103	23	Yes	18	49	Yes	104	Yes
20	15	72F	Psychogenic disease	Parkinson's disease			75	1125	15	101	18	Yes	21+	43+		100	Yes
21	15	68F	Vomiting	Diabetes			75	1875	18	102	22		46	61+			Yes

TABLE II. REVIEW OF THE LITERATURE—LABORATORY DATA

Case Number	White Blood Count	Eosinophiles %	Bilirubin			Urobilinogen		Albumin	Globulin	Prothrombin Time % Normal	Cholesterol	Cholesterol Esters	Alkaline Phosphatase, Bodansky Units	Cephaline Floc.		Thymol Turbidity
			Direct	Indirect	Total	Fecal	Urinary							24 Hour	48 Hour	
1	N				9					100			21		1+	2
2	N	N			23			N	N				E			N
3	N	0	13	0.7	13.7			4.3	1.7	85	400	280	E	0	0	1.6
4			18.8		14.7		0.09	2.3	3.4	N	276	202	15.3	N	N	N
5			10.0		5.9			4.2	3.9	N			6.9	N	N	3.0
6	7350	42	2.5		0.9			4.2	3.9	N	223	206	6.9	N	N	
7	N	N			5.4		+			100			17.6	0	+	1.8
8					4.6			3.8	2.9				55.1			4.0
9	13100	4	15	1.0	16.0	3.5	1-30	3.7	2.1	75	325		7.7	0	+	
10	N	7											17.3	0	1+	
11	5600	N	35		48.6	3.5	0.06	3.3	3.4		250		10.8		1+	±
12	10500	N	7.2		8.7	79	0.43	3.4	3.3		584		35.8		1+	3.9
13	14900	58			3.8		E						12.8			
14					E			N	N				E		N	N
15					E			N	N				E		N	N
16					E			N	N				E		N	N
17					E			N	N				E		N	N
18					E			N	N				E		N	N
19	4600	16	6.6	9.8	16.4		0			100	539		24	0	0	1.0
20	9000	5	9.5	14.0	23.5		1-10			93	353		21.9		2+	1.5
21	7600	2	1.2	2.4	3.6		1-10	2.5	2.8	N	1040	656	51.4		1+	2.2

and in most cases the direct was more elevated than the indirect bilirubin. (In *Cases 4* to *6* where the total bilirubin is reported as less than the direct, the explanation of the apparent discrepancy most acceptable is error, the indirect being reported as total). Three fecal urobilinogen examinations are reported: *Case 9* (in Ehrlich units) is below normal *Case 11* (in mg. per twenty-four hours) below normal; and *Case 12* (in mg. per twenty-four hours) normal. The urinary uroblinogen in *Case 4* is very low (two hour), in *Case 9,* high (dilution), in *Case 11,* low (two hour, Ehrlich units), in *Case 12,* normal (two hour, Ehrlich units), *Cases 20 and 21* are reported in dilution and are also normal. These data are too few and inconsistent to allow generalities as to fecal and urinary urobilinogen in this syndrome.

Fifteen cases reported the serum protein. Eight of these show an A/G ratio of less than 1.5/1, and three of them show a reversal of the A/G ratio. Six show albumin values of less than 4.0 gm./100 ml., and five show globulin values higher than 3.0 gm./100ml. None of the four reported cholesterol esters as signficantly elevated. Seven of the nine cholesterol levels reported are elevated

above 250 mg./100 ml. The prothrombin time, as a rule, seems within normal limits.

All cases reported alkaline phosphatase values; of these, only three were below 10 Bodansky units (seven reported only as elevated). The highest value reported was 51 units. The cephalin flocculation tests were normal, as were the thymol turbidity tests. Elevated blood sugars and glycosuria have been observed.[19]

TABLE III. REVIEW OF THE LITERATURE—PATHOLOGICAL DATA

Case No.	Cholestasis	Infiltration	Degeneration	Eosinophiles	Fibrosis
3	Slight	Neutrophiles, eosinophiles, lymphocytes	Slight	Yes	
4	Slight	None	None	None	None
7	Slight	Lymphocytes		None	None
9	Severe	Neutrophiles, monocytes	None		
11	Slight	Slight	None		None
12	Severe	Severe	Slight	None	None
13	Moderate	Slight	None		None
19	Slight	Polys, lymphocytes			
20	Slight	Polys, lymphocytes			Slight
21	Slight	Polys, lymphocytes			Mod.

TABLE IV. SIGNIFICANT DATA OF PATIENTS WITH THORAZINE JAUNDICE
Hurley Hospital

	Eosinophilia	Alkaline Phosphatase	Serum Bilirubin	Liver Biopsy	Significant Past History	Surgery or Clinical Course
1.	21	30.8	18.9		Not recorded	Recovered
2.	4	3	7.5		Not recorded	Recovered
3.	6	7.1	16.18	Intra hepatic obstruction	Not recorded	Recovered
4.	8	8.1	6.86		History of allergy	Recovered
5.	4	25.6	10.1		Cholecystostomy with draining sinus present	Recovered
6.	7	8.2	16.7	Intra hepatic obstruction	History of allergy and gallbladder disease	Died following surgery
7.	2	22	8.1		History of gallbladder disease and allergy	Died following surgery
8.	9	44.5	24.2		History of allergy	Recovered following surgery

Pathological Data.—In ten cases, the liver was examined microscopically, on needle biopsy or autopsy section, or both. The pertinent findings are shown in Table 3. The significant feature appears to be cholestasis with inspissated bile noted in the canaliculi. Infiltration is frequently noted, usually slight in degree and of various cellular types. In one case, eosinophilic infiltration was sufficiently pronounced to warrant comment. Degeneration of liver cells and fibrosis do not appear to be typical, and if present, only of slight or moderate degree.

Case Reports*

A study of eight cases of thorazine jaundice seen in Hurley Hospital reveals a similar clinical and laboratory picture. Four cases had an elevated alkaline phosphatase. Seven had an eosinophilia ranging from 4 to 21 per cent. Four cases out of the eight had a definite allergic diathesis. In three patients, the thorazine jaundice was superimposed on previous bialiary tract disease. Two of these patients were operated with fatal termination. One patient survived a negative exploration.

Case 1.—Z. D. was a woman, forty-nine-years-old, white, with a history of hypertension for twenty-five years. She was admitted to this hospital July 14, 1955, complaining of hypertensive headaches and anxiety. At that time she was placed on thorazine, 25 mg., t.i.d. She had a subjective improvement from her original complaint. Three days after being placed on the drug, the patient noticed the onset of pruritus. She received the drug for two weeks on an out-patient basis. At that time, the jaundice was first noticed by her attending physician. The dosage of thorazine was then cut to 10 mg. t.i.d. The patient then continued on it for another week. At that time, the patient was seen to be jaundiced with severe pruritus. She had light stools and dark urine. She was admitted to the hospital August 22, 1955. The physical examination showed a patient with essentially the same physical findings as on her previous admission. The patient had marked jaundice and evidence of pruritus. Her blood pressure was 186/100. Funduscopic examination showed minimal A-V nicking. The abdomen was obese. The liver, kidneys, and spleen could be felt. There was no tenderness. She gave a history of epigastric distress, fatty food intolerance and gas.

Laboratory findings on admission to the hospital.—Routine urinalysis and serology were negative. Hemoglobin 83.5 per cent (13 grams); red blood cell count, 4,530,000; white cell count, 6,400 (58 neutrophiles, 34 lymphocytes, 1 monocyte, 7 eosinophiles). Serum bilirubin 17.1 mg. per cent. Urine bilirubin was positive

*Review of thorazine jaundice at Hurley Hospital, Flint, Michigan.

in undiluted specimen. Zinc sulphate turbidity, 4 units. The patient had a negative cephalin flocculation at twenty-four in forty-eight hours. Alkaline phosphatase 8.2 Bodansky units.

The impression on admittance was that the patient was experiencing thorazine-induced jaundice. The patient was treated conservatively with sedation, high protein—high carbohydrate—low fat diet, and the usual expectant management. On September 7, 1955 she had a serum bilirubin of 16.7, alkaline phosphatase of 5.9, serum cholesterol of 211. She had a positive test for bilirubin in the urine. Thymol turbidity was a plus 3. The CBC remained essentially the same. Her Coombs test was negative in both the direct and indirect methods. The patient appeared more jaundiced and complained of severe pruritus. On September 9, 1955 a liver biopsy was performed which showed no indication of tumor or inflammation. There were numerous bile thrombi. The final diagnosis being that of an obstructive jaundice, intra-hepatic. On September 14, 1955 the patient's serum bilirubin had risen to 26.2 mg. per cent, 25 mg. per cent direct and 1.2 mg. per cent indirect. Her pruritus had abated some, but she still remained markedly jaundiced. She complained of a large amount of gas pain. Because of the patient's long history of epigastric distress and because the possibility of common duct stone could not be completely ruled out, an exploratory laparotomy was elected on September 20, 1955. This was approximately two months after the onset of the patient's jaundice.

Operative Report.—On entering the peritoneal cavity there was a small amount of bloody fluid. This was believed to be probably due to previous liver biopsy. Palpation of the gall bladder revealed it to be adherent with a slight thickened wall. Multiple, moderate sized stones were found in the gall bladder. Exploration of the common duct revealed no stones to be present. There were no strictures seen. A probe could not easily be passed in the right hepatic duct, but it was eventually dilated followed by the passage of some dark blood and bile. A punch biopsy of the liver was carried out with brisk bleeding encountered. This was controlled with a mattress suture. A cholecystectomy was carried out in the usual manner. A T-tube was left in place in the common duct. It was estimated that 3,000 cc. of blood was lost at surgery. This was replaced with 4,000 cc. of blood and 1,000 cc. of 5 per cent glucose and water. Postoperatively, the patient did very poorly. She had increased respiration with decreased blood pressure (78/60). The pulse was weak and thready. The patient progressed rapidly downhill with shock and cyanosis. She received extensive blood transfusions, but did not respond. The patient expired on September 21, 1955, the morning following surgery.

Autopsy Report.—Unfortunately the necropsy was limited to examination of the liver through the surgical incision.

On opening the incision, the abdominal cavity was found to be filled wtih clotted and liquid blood. An estimated 3 liters of blood was removed. Examination of the abdominal organs through the incision revealed no abnormalities. The surface of the liver was smooth and mottled green in color, otherwise, it was not remarkable. There was surgical absence of the gall bladder. The T-tube was in place in the common duct and reached well into the liver parenchyma. The terminal 1 cm. of the T-tube appeared to have perforated the hepatic duct and entered directly into the parenchyma. There was hemorrhage and edema about this terminal portion of the T-tube. The section of the duct system failed to reveal any mechanical obstruction.

Microscopically, there was a picture of biliary obstruction with intra-hepatic bile stasis. There were innumerable bile thrombi in the intra-cellular canaliculi. This occurred in the central and mid-zonal areas of the lobules. The peripheral zone was not remarkable and there was no bile stasis in the biliary radicles of the portal spaces. There was no demonstrable hepatocellular inflammation or degeneration, nor was there inflammatory infiltrate in the portal areas.

Final Anatomical Diagnosis.—1. Intra-abdominal hemorrhage with hemoperitoneum, postoperative clinical hemorrhagic diathesis. 2. Intra-hepatic cholestasis, severe, post-thorazine therapy. 3. Recent cholecystectomy and common duct exploration.

Case 2.—M. C. was a sixty-seven-year-old woman admitted on December 16, 1954. She had a history of clay-colored stools for a three-weeks duration with gradually developing jaundice. She had been in the hospital thirty-four days prior to this admission with a diagnosis of conversion reaction and neurodermatitis disseminata. During this stay in the hospital, she had been on 50 mg. of thorazine q.i.d. Six days after the initial administration of the drug, the patient developed urticaria. It was felt by the attending dermatologist that the skin manifestations might have been due to thorazine and the drug was discontinued after the patient had received it for a total of eight days. The urticaria cleared subsequent to this change in therapy, possibly with the aid of benadryl. The only drug the patient had been on since this previous admission was benadryl and an undetermined amount of cortisone. At the time of the patient's discharge there was no record of jaundice and the laboratory work was all within normal limits.

The past history revealed numerous admissions for psychiatric conditions. Abdominal x-rays revealed an incidental radiopaque gallstone. Six months before her last admission to the hospital some liver tests were as follows: BSP 82.5 per cent retention in five minutes, 11.8 per cent retention in thirty minutes; serum bilirubin .2 mg. per cent. Throughout her numerous stays in the hospital the patient had normal blood counts and urinalyses and negative serology.

Clinical Course of Last Hospital Admission.—The patient remained icteric and complained severely of generalized pruritus. The liver battery was as follows: A/G ratio 2.2 to 1 with an albumin of 3.9 gm. per cent and globulin 1.8 gm. per cent; total serum proteins

5.7 gm. per cent; zinc sulphate 23 units; prothrombin time taken on four occasions was within normal limits varying from 16 to 18; cephalin flocculation, negative at twenty-four and forty-eight hours; thymol turbidity, 17 units; alkaline phosphatase 22 Bodansky units; serum bilirubin 8.1 mg. per cent; urine bilirubin, positive in dilution of 1-10.

On admission, complete blood count showed 94 per cent hemoglobin (14.6 grams), red blood cells, 5,200,000, white blood cells, 4,000 with 56 per cent neutrophiles, 42 per cent lymphocytes, and 2 per cent eosinophiles. Negative urine and cardiolipin. The patient's old x-rays showing the radiopaque gallstone were reviewed and because of the biliary calculi and the laboratory results indicating obstructive jaundice, exploratory laparotomy was elected. Prior to surgery she received two 25 mg. doses of thorazine inadverently before the past history of possible allergic manifestations was learned. The patient's past history of prolonged cortisone administrations was unknown to the surgical consultant and she did not receive any steroid therapy prior to surgery. At laparotomy, there was a moderately thick-walled gall bladder containing multiple stones. The common duct was explored, but no obstruction was present. The patient developed some shock-like episodes while on the table, was immediately closed and returned to her room.

Postoperatively, the patient did very poorly. She was given Levophed because of prolonged hypotension. Eight units of blood were administered over a period of two days. Her blood pressure was maintained at 90/60, but on her second postoperative day, it began to slip and no amount of intravenous administrations relieved her hypotension. On the last hospital day, she spiked a temperature of 104° rectally. Adrenal-cortical extract, 50 cc. in 5 per cent glucose and water was administered on her final hospital day with a transient rise in blood pressure to 140/70. Hypotension again resulted. She developed an anuria and expired on her second postoperative day.

Autopsy Findings. — The cardiorespiratory system showed no pathology except for moderate congestion and edema of the lungs. Upon entering the abdomen about 2000 cc. of clotted blood was observed. The liver weighed 1300 grams. It was soft and tan in color. The gall bladder was absent. A section of the bilary radicles showed a slightly dilated common duct with no evidence of obstruction. A T-tube was in place. There was a considerable amount of old blood adherent to the gallbladder bed on the under surface of the liver suggesting the origin of the abdominal hemorrhage. The stomach, pancreas, and spleen showed no pathology. The kidneys showed a pale cortex and gross evidence of shock. Microscopic examination of the liver showed severe degenerative change with necrosis, mostly central lobular. There was severe biliary stasis with numerous bile thrombi. The only areas free of these static bile collections were the outer portions of the lobules. The biliary radicles in the portal areas were empty. Only an occasional minimal collection of lymphocytes was seen. A section from the gallbladder bed showed fresh hemorrhage.

Final Anatomical Diagnosis.—1. Toxic hepatitis, severe. 2. Recent cholecystectomy. 3. Intra-abdominal hemorrhage from gallbladder bed. 4. Lungs, bilateral congestion and edema. 5. Possible adrenal failure secondary to previous cortisone administration, historical.

Discussion

Of the twenty-nine cases of thorazine jaundice included in this report, 35 per cent were explored. Of the patients explored there were three deaths, two from hemorrhage and one with an associated postoperative agranulocytosis. There were two deaths of the patients not operated. One death was believed due to the hepatitis, the other from an unrelated cause. The percentage of deaths directly associated with thorazine jaundice, with or without surgery, is 14 per cent. The two cases presented in this paper are the only ones reported associated with a postoperative hemorrhage.

The frequent occurrence of an allergic diathesis in the patients with a frequent, and sometimes extreme, eosinophilia and the occasional eosinophilic infiltration of the liver suggests that the hepatitis is produced as an allergic phenomenon with the liver as the shock organ.

The laboratory differentiation between obstructive and thorazine jaundice is not possible with the present methods of determination. Recent work with the use of a serum iron determination in detecting a toxic hepatitis suggests a possible differential test.[16]

A recent study of fifty patients receiving thorazine revealed that 42 per cent of them developed abnormal liver function tests. Only one of these patients became jaundiced.[18]

Summary

Thorazine jaundice seems to develop independently of the dosage or total amount of the thorazine received. There is frequently a past history of allergy. Jaundice appears two to three weeks after the administration of the drug and is usually preceded four or five days by chills and fever, anorexia, nausea and vomiting, sometimes pruritus, or general malaise. There may be a peripheral eosinophilia.

The laboratory tests are consistent with an obstructive jaundice. Liver biopsy shows cholestasis with moderate infiltration of leukocytes. Awareness of this syndrome, when the surgeon is confronted with what appears to be a case of obstructive jaundice, may help in avoiding unnecessary surgery and its disastrous consequences.

(References on Page 601)

The Michigan Tumor Registry

Statistical Study of 7,444 Malignant Neoplasms

By Isidore Selzer, M.D.
Detroit, Michigan

THE Michigan Tumor Registry was established in 1949 and began operations in mid-year of 1950. The organization and operation of the Registry has been described[1] previously and these details will not be repeated here. It will be sufficient to reiterate that the Michigan Tumor Registry is a voluntary, state-wide agency whose chief function is to collect and maintain a file of specimens of neoplastic disease with a clinical history of each case. The following discussion will be limited to that aspect of the Registry's function which may be classified under the heading of "cancer reporting" and will omit any consideration of the Registry's function as a "tissue or pathology registry." This communication is therefore intended to serve both as a progress report of the Registry as well as an indication of the potential value of a central cancer registry in a cancer control program for a given area. Although obviously incomplete, as will be pointed out below, the Registry material is drawn from a wide area and it is felt that an analysis of the registered cases may provide pertinent information, although of a purely relative nature. It must be emphasized that any conclusions, implied or stated, are based solely on the group of neoplasms under consideration without regard to the age, sex, or race incidence of the general population.

Nature and Source of Material

Although our Tumor Registry accepts benign as well as malignant neoplasms, this report will deal only with those neoplasms which are definitely considered to be malignant, both histologically and clinically. During the period under survey (1950 to 1956), 7,444 cases of malignant neoplasms of all sites were reported to the Michigan Tumor Registry. Since these cases are submitted by pathologists, all cases reported to the Registry have had histologic confirmation of the diagnosis. This feature of our Registry, that is, 100 per cent microscopic confirmation of the diagnosis of cancer, is not found in most state and central cancer registries.

The cases in this series originated in forty-six hospitals and one cancer detection clinic, and were submitted voluntarily by the pathologists of the respective institutions. The latter are located in six communities of the Detroit metropolitan area and fifteen cities in other parts of Michigan. Of the 7,444 cases, 5,110 are from the Detroit metropolitan area and the remaining 2,334 are from other parts of the state. The method of reporting cancer cases from hospitals is an excellent one and when reporting is complete, would encompass at least 75 per cent of all cases of cancer which occur in a given area. This estimate is based on the experience of others (Dorn and Cutler;[2] Griswold et al[3]) with large series of cases and would, of course, vary from area to area, depending on the accessibility and availability of hospitals and pathology laboratories and on the general level of medical practice in the area.

Although hospitals in all major cities in the state are represented in this series, several major hospitals are completely lacking and most of the hospitals contributing case reports are represented only nominally or in small degree. Actually, twenty-six hospitals have submitted less than 100 cases each and only five hospitals have submitted more than 500 cases each. Obviously, the total number of cases in this series does not reflect a complete record of all or even 75 per cent of the cancer cases occurring in Michigan during this period (1950-1956) and this is readily apparent from a comparison with related figures from other sources. For example, in their 1947-1948 survey, Dorn and Cutler estimated the number of newly-diagnosed cases of cancer during the year 1947 in

The Michigan Tumor Registry is sponsored by the Michigan Pathological Society; American Cancer Society, Southeastern Michigan Division; Detroit Institute of Cancer Research and the Michigan State Medical Society. The Registry receives its financial support from the American Cancer Society, Southeastern Michigan and Michigan Divisions.

the Detroit region (actually Wayne County) as 5,996. As a further example, the number of cancer deaths reported to the Michigan State Health Department for the period covered by this survey (1950-1956) totals 67,923.[4]

organ systems and not for separate organs, except for some components of the genital tract. The largest number of cases occur in the digestive organs which alone account for more than 25 per cent of the total number. Genital organs and

TABLE I. NUMBER OF CASES AND PERCENTAGE DISTRIBUTION BY SITE AND SEX

Site Group and Statistical Code[5]	Male	Per Cent of All Neoplasms	Female	Per Cent of All Neoplasms	Total Both Sexes	Per Cent of All Neoplasms
Buccal cavity and pharynx (140-148)	255	3.4	59	0.8	314	4.2
Digestive tract and peritoneum (150-159, exclusive of 156)	1,138	15.2	764	10.2	1,902	25.5
Respiratory system (160-162)	498	6.6	72	0.9	570	7.6
Breast (170)	14	0.1	1,012	13.5	1,026	13.7
Genital organs (171-179)	491	6.5	960	12.8	1,451	19.4
Urinary tract (180-181)	374	5.0	147	1.9	521	6.9
Skin (190-191)	283	3.7	167	2.2	453**	6.0
Brain and other parts of nervous system (192-193)	137	1.8	92	1.2	230*	3.0
Endocrine glands (194-195)	44	0.5	123	1.6	167	2.2
Bone (196)	33	0.4	24	0.3	57	0.7
Soft tissue (197)	59	0.8	59	0.8	118	1.6
Lymphatic and hematopoietic systems (200-205)	234	3.1	134	1.7	369*	4.9
Other and unspecified sites (156, 163, 198, 199)	163	2.1	100	1.3	266**	3.5
Totals	3,723		3,713		7,444†	99.12% (100%)

*Includes 1 unspecified.
**Includes 3 unspecified.
†Includes 8 unspecified.

The significance of the hospital and community distribution is further lessened by the fact that the latter denotes only the hospital in which the patient was treated and does not necessarily signify the location of the patient's residence. Such information might be of distinct value in epidemiological studies relating to cancer but this has not been included in our clinical data.

Composition According to Site and Sex

Table I shows the distribution of the 7,444 malignant neoplasms by site groups for both sexes. As can be seen, the total number of cases for each sex is essentially equal. These findings are somewhat at variance with the findings of Dorn and Cutler who found 24,525 female and 21,865 male patients out of a total of 46,390 newly diagnosed cases in their 1947-1948 survey, and also with the results of the Connecticut survey in which Griswold and his group reported 39,628 females and 35,866 males out of a total of 75,494 cases. This difference between our material and the two large series quoted suggests that our material does not represent an adequate sampling of the population involved.

The anatomical site classification and coding in Table I is based on the Statistical Code of the International Statistical Classification of Diseases, Injuries, and Causes of Death.[5] Because of space limitations, numbers of cases cited will be for breast are second and third, accounting for 19.4 per cent and 13.7 per cent, respectively, of the total (Table I). Thus nearly half of the malignant tumors in this series originated in the digestive system and genital tract.

The most striking sex differences are noted in the breast, respiratory system, and genital organs, with marked, but less striking, differences in the two groups comprising buccal cavity and pharynx, and digestive tract and peritoneum. Cancer of the breast is extremely rare among the males, accounting for only 0.1 per cent of all the tumors in this series, whereas 13.5 per cent of the total number originated in the breast in the females in this series. When breast and genitalia are grouped together, the sex difference is even more striking. Both of these classifications in females comprise over 26 per cent of the total number of cases as against less than 7 per cent in males (Table I). In other words, in a little more than half of the females in this series, the cancer originated in the breast and genitalia whereas these two organ groups accounted for less than 14 per cent of all the male cases (Fig. 1).

On the other hand, there were more than seven times as many cancers of the respiratory system among the males as among the females. Expressed in percentages for each sex, in 13.3 per cent of the males cases, the tumors in this group orig-

inated in the lung in contrast to only 1.9 per cent of the female cases (Fig. 1).

Cancers of the digestive system in this series lead all other site groups for males, constituting 30.5 per cent of all male cases. This means that almost one in every three cancers in males occurred in the digestive system. For the female group, the comparable figure in the digestive system is 20.2 per cent or one in every five cancers (Fig. 1). (Liver and bile duct tumors, which are included in the cancers of the digestive system, occur more often in this series in females).

Thus, exclusive of the breast and genital organs, there were more male than female patients among those having the more commonly occurring tumors. Of the less common forms of cancer (such as those of the endocrine glands), the female patients show a higher proportion of the total than the male. In the soft tissue group, both female and male patients in this series exhibit an equal proportion of the total number of cases (Table I).

Composition According to Race

The cases in this series have been divided into "white," "Negro" and "other and unspecified." (504) in the miscellaneous and unspecified category decreases considerably the number of cases available for this portion of the study. But in any case, it is not possible to draw any conclusions regarding the total incidence for racial groups

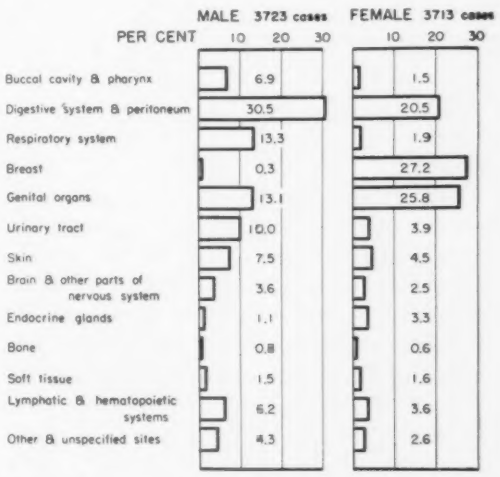


Fig. 1. Comparison of percentage distribution of cases by site groups.

TABLE II.
DISTRIBUTION OF CASES WITH KNOWN RACE ACCORDING TO SITE GROUPS AND SEX

Site Groups	Number of Cases						
	White		Total White	Negro		Total Negro	Ratio of White to Negro
	M	F		M	F		
Buccal cavity and pharynx	221	46	267	22	11	33	8.09:1
Digestive system and peritoneum	941	603	1,544	134	106	240	6.43:1
Respiratory system	442	63	505	46	9	55	9.18:1
Breast	12	821	833	1	105	106	7.85:1
Female genital organs		717	717		178	178	4.62:1
Male genital organs	400		400	61		61	6.55:1
Urinary tract	330	115	445	24	12	36	12.36:1
Skin	241	145	387*	6	8	14	27.64:1
Brain and other parts of nervous system	125	87	213*	5	3	8	26.62:1
Endocrine glands	41	101	142	0	15	15	9.46:1
Bone	27	16	43	6	3	9	4.77:1
Soft tissue	46	49	95	6	5	11	8.63:1
Lymphatic and hematopoietic systems	203	116	320*	18	10	28	11.42:1
Other and unspecified sites	123	74	199**	24	11	36*	5.52:1
Totals	3,152	2,953	6,110†	353	476	830*	7.36:1

*Includes 1, sex unspecified.
**Includes 2, sex unspecified.
†Includes 5, sex unspecified.

The latter grouping includes a few cases of races other than Negro, for example, Chinese, American Indian, but for the most part it signifies that the racial designation was omitted from the clinical data which was submitted to the Registry.

According to the above grouping, there are 6,110 white and 830 Negro patients in this series (Table II). The relatively large group of cases from these incomplete figures, and furthermore, no attempt will be made to arrive at any conclusions regarding racial susceptibility for specific sites or site groups. However a comparison of numbers of cases and ratios for Negro and white in the various site groups has been made and attention will merely be called to those which appear to be most significant.

TABLE III. NUMBER OF CASES IN EACH SITE GROUP ACCORDING TO AGE IN DECADES

Site Groups	Age									
	0-10	10-20	20-30	30-40	40-50	50-60	60-70	70 and Over	Unsp.*	Total
Buccal cavity and pharynx	1	0	5	20	48	61	101	73	5	314
Digestive system and peritoneum	3	2	22	74	221	451	691	426	12	1,902
Respiratory system	3	1	3	15	81	186	217	61	3	570
Breast			20	97	275	239	229	161	5	1,026
Female genital organs		7	36	146	216	266	200	82	7	960
Male genital organs	1	4	26	42	35	57	154	167	5	491
Urinary tract	16	3	3	24	54	116	181	123	1	521
Skin	2	2	18	33	65	88	111	115	19	453
Brain and other parts of the nervous system	30	12	14	28	31	66	38	10	1	230
Endocrine glands	9	6	27	24	32	35	24	10		167
Bone	7	15	11	7	3	6	3	5		57
Soft tissue	8	8	7	8	18	22	28	17	2	118
Lymphatic and hematopoietic systems	8	11	35	42	54	77	106	35	1	369
Other and unspecified sites	3	1	4	27	47	60	86	37	1	266
Total in each decade	91	72	231	587	1,180	1,731	2,168	1,322	62	7,444

*Age unspecified.

Table II shows the distribution into site groups for both sexes in all those cases in which the race has been specified. The ratio for all cases is 7.36 white to 1 Negro. The most significant variations from this ratio in the more commonly occurring tumors are seen in those of the skin, urinary tract and respiratory tract where the ratio is increased in favor of the white group, and in those of the genital organs where the ratio is increased in favor of the Negro group. Among the separate organs of the genital tract (not listed in any table) there are 399 cases of malignant tumors of the cervix with known racial designation, of which there were 280 white and 119 Negro. Expressed in percentages, 25 per cent of all the cancers in the Negro females occurred in the cervix in contrast to 9.4 per cent of the white females for the same site. While in the male genital organs as a group, there was a higher proportion of Negro cases than in most of the non-genital site groups, the testis, alone, showed an unusually low number of Negro cases, three as compared to eighty-one white of a total of eighty-four cases with race specified.

The most marked difference in racial occurrence is evident in the cancers of the skin (both carcinoma and malignant melanoma) which show a white-Negro ratio of 27.6 to 1. In the less frequently occurring tumors (such as those of the brain, the endocrine glands, and the lymphatic and hematopoietic systems) the ratio in favor of the whites is also increased. In the most frequently occurring group of cancers (those of the digestive tract and peritoneum) there are relatively larger numbers of Negroes than in the total series. This is due to a proportionately larger number of tumors of several organs of this group, notably the esophagus and stomach, found in Negroes.

Age Distribution

The history of all of the cases received by the Registry should include the age of the patient and this procedure has been followed in all except sixty-one cases of malignant neoplasms. Although not expressly stated, the age designated is presumed to be the age of the patient at the time of diagnosis, whether it be at autopsy or at surgery. There are 355 cases in which the case was registered at the time of a recurrence of the original lesion and in these cases it has not been specified whether the age given is the age at the time of the initial diagnosis or that at the time of the recurrence. In a further 781 cases, it was not stated whether the lesion was a recurrent or a primary (original tumor) and therefore the same reservation must be made in regard to these cases as to the ones designated as recurrent.

In Table III, all the cases in this series in which the age was specified have been grouped into decades and divided by broad site groups for each decade. Except for a slight decrease in the second decade due to a falling off in the occurrence of congenital tumors, the number of malignant tumors of all sites increases with each decade, reaching a peak in the seventh decade and then falling off rather sharply in the combined period of eighth, ninth and tenth decades, in all categories except those of the skin and male genital organs, where there is actually a slight increase. Those site groups with more frequently occurring tumors which have their peak occurrence in the seventh decade include buccal cavity and pharynx, digestive system, respiratory system, urinary tract, and lymphatic and hematopoietic systems.

Of interest is the changing emphasis on different

sites in the various age groups from the urinary tract (chiefly Wilm's tumor of the kidney) and nervous system in the first two decades to the genital organs and endocrine glands in the early adult years and then shifting to the breast, skin, digestive and respiratory tracts and back again to the urinary tract in the middle to advanced years.

TABLE IV. STAGE OF DISEASE AT TIME OF DIAGNOSIS IN 5,409 CASES

Site Group	Localized	Regional Lymphnode Metastases	Extension Beyond the Regional Nodes and/or Distant Metastases
Buccal cavity and pharynx	158	60	23
Digestive tract	650	425	507
Respiratory tract	198	121	159
Breast	400	346	77
Female genitalia	505	51	163
Male genitalia	321	17	60
Urinary tract	320	27	49
Skin	326	15	8
Brain and other parts of nervous system	165	7	6
Endocrine glands	86	27	25
Bone	30	1	8
Soft tissue	52	5	11
Totals	3,211	1,102	1,096

Status and Extent of Lesion

The status of the neoplasm at the time of reporting, that is, whether this is the original lesion or a recurrence of the original lesion, and the extent of the disease (primary or metastatic) are also among the factors about which information is requested on the Registry history card. Of the 7,444 neoplasms in this series, either the status or the extent of the lesion was omitted in 960 cases. Because of the difficulty of determining the extent of disease in tumors of the lymphatic and hematopoietic System, 294 cases in this category as well as 781 cases of recurrent tumors are also excluded from this part of the study. The state of disease in the remaining 5,409 cases is shown in Table IV.

Of all cases in which the stage of disease at the time of diagnosis was specified, only 59 per cent were reported to be localized to the primary site, and more than 20 per cent had already progressed to distant metastases at the time of diagnosis. In site groups such as the skin, brain, and urinary tract, the majority of cases were localized at the time of diagnosis, but in the breast, a little more than half of the cases showed metastases either to the regional lymph nodes or to distant areas. In the respiratory tract as well as the digestive tract, almost 60 per cent of the cases have already metastasized at the time of diagnosis.

Summary and Conclusion

A group of 7,444 malignant neoplasms submitted to the Michigan Tumor Registry by hospital pathologists throughout the state have been analyzed according to site groups, sex, race, age, and extent of lesion. The sampling represented in this group of neoplasms is shown to be incomplete both in numbers, geographical distribution and in certain essential data. However, the basic method of voluntary submission of cancer data to a central agency through the medium of hospital reporting is considered to be a good one. The collection and analysis of cancer data on a statewide basis is a necessary prerequisite for estimating the magnitude of the cancer problem and for indicating the areas of diagnosis and treatment in which emphasis should be stressed.

References

1. Selzer, Isidore: The Michigan Tumor Registry—An historical survey. Michigan M. Soc., 56:451-455 (April) 1957.
2. Dorn, Harold F., and Cutler, Sidney, J.: Morbidity from cancer in the United States. Public Health Monograph No. 29, U. S. Dept. of Health, Education and Welfare.
3. Griswold, M. H., Wilder, C. S., Cutler, S. J., and Pollack, E. S.: Cancer in Connecticut 1935-1951. Connecticut State Department of Health, Hartford, Connecticut, 1955.
4. Michigan Department of Health, Division of Disease Control. Records and Statistics.
5. Statistical Code for Human Tumors, WHO/HS/Canc./24.1, August, 1956.

A Cancer Registry Program

II. Responsibilities in the Development and Maintenance of a Cancer Registry

By Harry M. Nelson, M.D.
Detroit, Michigan

THE ACTION by the American College of Surgeons in making individual hospital registries an accreditation requirement to meet the minimum standard for approval of a cancer program, has focused new interest on central registries as well as on individual hospital registries.

This is an understandable development and one that was anticipated and certainly hoped for by the College of Surgeons. The idea of a continuous and systematic audit of the cancer situation over a large geographic area is a compelling one to those interested in a cancer control program. This is the idea of the central registry and it requires, therefore, no special pleading.

Historically, the central registry preceded the individual hospital registry. Experience proved, however, that any kind of a central registry could only be built on the sound foundation of a group of well established hospital registries. With 728 approved hospital cancer facilities[1] already in existence, and many more to be added from year to year as a matter of course, the outlook for the establishment of successful central registries is today very bright indeed. The new concept of the hospital cancer registry being promoted by the College of Surgeons has already made the central registry a realizable and practical objective.

While conditions are favorable to the establishment of both central and hospital registries, the ultimate success of either depends, perhaps more than on anything else, on the discipline and foresight with which the question of responsibility is determined from the start.

As far as the individual hospital registry is concerned this question already has its formal answer. The responsibility for the hospital cancer program, according to the requirements of the American College of Surgeons, rests with the hospital Committee on Cancer. In the 1955 edition of the College's *Manual for Registration and Cancer Clinical Activities*, under the section on "Minimum Requirements for Approval of a Cancer Registry and Cancer Clinical Activities," the role and responsibilities of the hospital Committee on Cancer are stated as follows:

> "There shall be a Committee on Cancer of the hospital medical staff consisting of physicians directly concerned with the diagnosis and treatment of cancer that shall be appointed by the appointing authority of the medical staff. The duties of this Committee shall be to initiate, supervise and appraise the cancer program and to report to the medical staff at least annually. It shall maintain close liaison with the Tissue Committee."

As an integral part of an approved hospital cancer program, the hospital cancer registry is thus put within the province of the authority and responsibility of the hospital Committee on Cancer. Since the purpose and function of the cancer registry may be regarded as being primarily statistical, it becomes the very important job of the Committee on Cancer to coordinate and to maintain in alignment the statistical and clinical phases of the hospital cancer program.

It is important from the viewpoint of maintaining the necessary discipline that we regard the work of the cancer registry as being primarily statistical. The cancer registry can make its most important contributions to the clinical aspects of the cancer program only if it performs its own special tasks with the strictest regard for the necessary statistical disciplines. At the same time, however, we must be careful not to equate the terms "statistical" and "clerical."

It is true that the day by day activities of the registry, including the routine abstracting of charts, the cross-indexing and filing of records and other such technical jobs, can be carried out efficiently by a capable medical secretary.

However, this simple clerical image of the job is shattered the moment we realize that the

Dr. Nelson is Chairman, Michigan Cancer Coordinating Committee.

registry is required to compile records and obtain follow-up on private as well as on clinic patients. To do this successfully, the registry must have the active support and cooperation of the entire medical staff. An objective such as this can be achieved only by a committee of the staff.

Furthermore, the registry will from the very beginning face such administrative problems as space and personnel requirements and the spelling out of working relationships with other existing units of the hospital, such as the record room and the cancer clinic. All of these are problems which can be handled effectively only by a staff committee vested with proper authority.

Problems relating to existing records and record-keeping procedures must be worked out jointly by the Committee on Cancer and the Committee on Records. Ground rules for operation of the registry, that is, decisions on what will be considered a diagnosis of cancer, methods of recording stage and grade of disease, purpose of the treatment, et cetera, must be established by competent medical authority for the guidance of the clerical staff.

Nelson and Jennings[2] explain the idea of the hospital registry, as it is being promoted by the College of Surgeons, as follows:

> "The philosophy of the individual hospital registry, as now required by the American College of Surgeons, is essentially that of a medical audit for cancer patients. It provides a tool for measuring the quantity and quality of medical care provided for cancer patients in a given institution.
>
> "The cancer registry is interested primarily in helping that patient who has cancer. It does this in several ways. First, it provides assistance for periodic follow-up information. Second, it makes possible the early detection of recurrent or metastatic diseases which might have been missed or ignored. Third, it leads to the evaluation of results of treatment and in the end helps to determine the best method of cancer therapy.
>
> "By requiring accurate information about histologic diagnosis, clinical extent of the disease, methods of treatment and other data, the cancer registry encourages better medical records. In simplest terms, it may be thought of as a mirror which reflects to the hospital staff what is good and what is bad with respect to the diagnosis and treatment of cancer in their institution."

In view of the nature of the medical audit which the philosophy of the registry demands, it is obvious that physicians on the hospital staff must acknowledge to themselves the need for a cancer registry, must sincerely want it, without reservations, if they are to give their whole-hearted support and interest, which it must have to function successfully. Only a committee of the staff, with the proper authority, can hope to do the necessary job of winning this kind of support and consideration.

It is clear, therefore, that the responsibility for the hospital cancer registry which is vested in the Committee on Cancer is not just a formal arrangement. It goes to the heart of the matter. The registry can be made as good a mirror of the cancer situation in a hospital as the medical staff desires, and the key to the desires of the medical staff is the Committee on Cancer.

In going from the hospital registry to the establishment of a central registry—that is, a registry for the geographic area in which the cancer records of a number of cooperating institutions are pooled—we find the same fundamental need for responsibility vested in competent medical authority.

The question of responsibility, as it involves competent medical authority, need have nothing to do with the question of sponsorship. It has been found that a central registry can function effectively if it is established under the jurisdiction and sponsorship of any one of such agencies as the Medical Society or any of the medical specialty Associations, the Health Department, the State Universities, the local division of the American Cancer Society, or any combination of these agencies. In all cases it is necessary that the sponsoring agency or agencies have the full co-operation of the hospitals, the Welfare Department, the Nursing Association, and other such groups and institutions.

However, regardless of the nature of the sponsorship under which the central registry is established, it is imperative, as a first condition for success, that its work be made the responsibility of some competent authorized medical group.

One reason why competent medical authority is essential to guide, counsel and direct the work of a central registry is that a central registry has to be handled as a two-way operation if it is to succeed. It is dependent for its success on the co-operation of the participating institutions, and this co-operation is not just a simple matter of disposition or good will but may involve, as it often does, a variety of problems which require for their solution the closest liaison with the vari-

ous hospital Committees on Cancer. In turn, the value and success of the individual hospital registries can be enhanced in many important ways by a central registry which enjoys the confidence and respect of the Committees on Cancer. It follows, therefore, that if this two-way operation is to mesh, with maximum advantage to the cooperating institutions and the central registry, there must be the same kind of competent medical authority on the level of the central registries as is to be found on the level of the individual hospital registries.

There is another important condition governing the success of a central registry: Its functions must be organized within the frame work of clear-cut definitions regarding jurisdiction and responsibility in all areas involving the collection, maintenance, use and disposition of the accumulated records.

There must be agreement among all concerned, carefully established in advance, regarding the methods to be used in the handling of cancer patient records because of their confidential nature. There must be similar agreement regarding procedures for identifying the participating institutions in the published reports of the registry's activities. Again, to avoid the danger that unauthorized use might be made of the materials accumulated by the central registry, a properly constituted medical committee must be established for the purpose of reviewing all requests by individual investigators interested in using the registry's records.

Regardless of the type of sponsorship under which the central registry is established, the two conditions we have discussed above, that is, the need for (1) competent medical authority to guide, counsel and give direction to the registry and (2) the need for organizing its functions within a framework of clear-cut definitions regarding the handling and disposition of its records, are basic to the successful operation of any central registry.

If these two conditions are kept in mind, the problem of sponsorship should not raise serious difficulties. In those states that have cancer coordinating committees, these committees have usually been instrumental in taking the necessary first steps in obtaining approvals and clearances for as well as participation in the establishment of central registry programs. In other states, the cancer committee of the state medical society has functioned admirably in the same capacity. The cancer registries in a number of counties, functioning on a county-wide basis, were initiated by the cancer committees of the medical societies of these counties and have continued to function under the supervision of these county societies.

The increasing interest in central cancer registries because of the encouragement they give to uniformity of reporting and comparative appraisals is well illustrated by the action taken by the American Cancer Society. At the regular meeting of the Society's Board of Directors, on October 22, 1955, the following resolution was passed, after it had previously been passed by a number of subcommittees:

> "The Subcommittee recommends that the American Cancer Society, in view of its warm approval of the concept of Cancer Registries, promote the support of such approved registries through assistance, guidance, and consultation, but that it does not encourage the direct financial subsidy of individual hospital registries. However, it is recommended that the American Cancer Society extend its support in every aspect, both financial and otherwise, to the careful development of central registries which can return valuable service and assistance to their participating hospitals."

In conclusion, now that conditions are becoming increasingly favorable to the establishment of central registries, it should be noted that a central registry can be established and can function effectively at the level of any geographic area, community, county or state. As a general rule it has been found that the value of a central registry, in terms of its services to the participating hospitals, is almost directly proportionate to its accessibility to these hospitals. In other words, the ease with which the services of the central registry can be made available to its participating hospitals should be a paramount consideration in determining the location of the central registry as well as the extent of the geographic area it is to serve. These considerations should not be construed to mean that a state-wide registry can be of no value. The point being made is that a state-wide registry should be located near the major hospital registries and should not be allowed to become excessively large and cumbersome, which would interfere with its necessary accessibility to the participating hospitals. Where because of special circumstances a state registry

(Continued on Page 621)

Physicians and Citizenship

By Honorable G. Mennen Williams, Governor
Lansing, Michigan

YOUR KIND invitation to address you is very much appreciated, indeed. My wife and I have had the keenest personal affection and admiration for a good number of your members, whom we count as near and dear friends. I have also had very pleasant and rewarding experiences with those of the medical profession who serve the State in an official capacity.

Now, on the important side of the family, as long as physicians are giving the nursing profession their just due, my wife who is very closely allied with that noble group is something of a zealot in the cause of doctors. Indeed, she has just about convinced our son, who seems to be acquiring most of the good and necessary qualities for a successful career of public service, that he will find more joy and satisfaction in the medical profession than in politics. Except for a certain pride of authorship, I am forced to confess that either career offers large opportunities not only for personal realization and satisfaction but public service and benefit.

Despite the timeliness of your invitation and my anticipated pleasure in talking to all of you, I suddenly found myself with the speaking date only a couple of days away and no thoughts reduced to order, not alone to paper.

My staff had obtained a great deal of information from our unfailing sources of counsel and information, Dr. Albert E. Heustis, the state public health director, and Dr. E. C. Swanson, the secretary of the State Board of Registration in Medicine. But I still felt somewhat in doubt as to what message I might bring to you tonight.

As I always do when I have a painful medical problem, I undertook to consult with our family doctor—God bless him. When I described to him the nature of my case, he thought for a few moments—on my long-distance telephone time—and prescribed as follows: "Doctors," said he, "get pretty well tied up with the exacting demands of their profession, and sometimes feel a little hesitant or a bit out-of-touch with the problems of government and citizenship. Why don't you talk about physicians and citizenship?"

Well, I can certainly understand that the vast encyclopedic knowledge required of a physician in the first place and the revolutionary changes taking place almost daily, to say nothing of the insistent demands of more and more patients, must more than tax any human being. However, to talk about a particular group's citizenship is a very ticklish charge, indeed. But my good doctor has prescribed strong medicine before, which he made me swallow. So here goes.

First, though, let me say that, as you well know, the most perfectly prescribed medicine may have a peculiar reaction due not to its intrinsic merits or faults but due to the character or perverseness of the patient. Consequently, if Dr. Ken Johnson's good advice comes through diluted or even polluted, don't blame him, but be resigned to taking stronger measures with your Governor.

For a long time, I have been intrigued by the dichotomous—(I wouldn't dare use that word on anybody but a doctor, and it really is not strong enough to get back at them for some of the twisters with which they have mystified me) —intrigued by the dichotomous picture the public have had of the medical profession.

Even dichotomous isn't the right word. Some people have one idea, some another, and not a few have both ideas, sometimes at the same time. Some people believe you are saints, some think you sinners, and some feel there is both a Dr. Jekyll and a Mr. Hyde.

Perhaps two anecdotes will illustrate generally what I mean. I repeated the first when, some years ago, I was charging my commission to study whether Michigan had an adequate number of doctors. This actually happened. A friend of mine was desperate because his dearly beloved little daughter was ill. He had called his own doctor, only to find he was not available. He next called another recommended doctor, only to reach the same conclusion. It was not until the seventh try that he was successful in getting

Excerpts from address given before the Michigan State Medical Society, Officers Night Banquet, Grand Rapids, Michigan, September 25, 1957.

a physician to come to his home to attend his ailing child. The doctor treated the child. My friend walked downstairs with him to the door. Just before leaving, the strange doctor handed my friend a pamphlet against "socialized" medicine, and the pamphlet said: "Certainly you don't want America to get into a situation where you can't have the doctor of your own choice."

Incidentally, however painful this particular situation, I want to say a fervent amen to the ideal of having a system where everyone has both the right and the opportunity of having the doctor of his own choice.

Now let me take up the other side of the matter. A very close friend of mine, a brilliant public figure had a tragedy in his life when his wife was severely stricken. He has given me permission to quote from a letter written as a result of this experience. The only changes I have made in this excerpt I am going to read to you is to substitute a fictitious name for the name of my friend's wife. This is what my friend wrote:

"I should like to observe, at this point, that I have developed a new and tremendous regard for the medical profession and its auxiliaries. The doctors who originally came into the case as strangers, both to me and Mary, have, in almost every instance, become devotees of Mary and intimate friends of mine. I have found in almost each one of them a deep human compassion and anxiety not only to save Mary's life as such, but also to preserve the meaning of her life.

"Their eagerness to do everything they know how to do is endless. Even more impressive is their deep feeling for each patient, and I am swept into the purview of the case as part of the patient. I am treated along with the patient. Amazingly, the doctors who originally started with Mary but no longer have any professional responsibility for her, since her transfer to the National Institute, continue to show as much concern for her now as when she was their charge. They keep in touch with developments. They consult constantly with the doctors now in charge. They visit her regularly after they have finished their own rounds at other hospitals, and on week-ends. I sleep, temporarily, at the house of one of them, because he lives near the National Institute. I have been taken into his own family. His interest and concern for Mary could not be greater for his own child. To these doctors the Oath of Hippocrates is a meaningful thing, and they live largely in accordance with it."

Many of us, I believe, have been perplexed by these two images. The able, dedicated, endlessly kind and self-sacrificing friend of man we know. And the public impression sometimes broadcast, generally by the AMA, and especially in the past.

Against this background, may I for a few moments comment on doctors and citizenship here in Michigan. It is needless to say that doctors have not always agreed with me, or I with them. However, I am happy to say that as time goes on, not only do I increase the warmth of my friendships and the depth of my admiration and gratitude for their individual deeds and worth, but I find multiplying the number of public questions on which we agree or upon which I can extend to the medical profession here in Michigan sincere commendation.

It is a matter of satisfaction to me that the Medical Society has established a special committee to maintain liaison with the Governor's office—and I sincerely hope that I will have the opportunity of meeting often with that committee in the future.

All of us, as citizens, have general responsibilities as citizens. But it seems to me that members of the medical profession have a special responsibility of good citizenship—and that is to do all they can to help see that medical services are made available to all who need them.

Certainly, the medical profession in Michigan has made great strides in discharging that responsibility. Here in our state, through the vision and work of Michigan doctors, the system of pre-paid medical and hospital service was born. We are having our normal and expected problems in making this great idea work. But I think it is to your great and lasting credit that you *did* pioneer in this field, and that the Blue Cross and Blue Shield systems as they were developed in Michigan have become a pattern for the whole country.

You have shown good citizenship, too, in your co-operation with the State Office of Hospital Survey and Construction in the community hospital building program under the Hill-Burton Act. In the last eight years, up to January, 1957, we have succeeded in planning, financing and completing fifty-eight hospital projects, involving more than 3,400 additional beds. These hospitals have brought the best of care to the people of every part of Michigan. The support of Michigan doctors was indispensable to this program.

The highly-successful operation of the Medical Society's placement bureau is another example of working citizenship. By bringing together the physician looking for a place to practice, and

the community that needs his services, the Society's placement bureau has done much to ensure good medical care in all parts of the State.

You have shown your public spirit and sense of public responsibility in many other ways—by the participation of so many doctors in Civil Defense; by the sympathy with which many of your members have dealt with the problems of refugee doctors and graduates of foreign medical schools; by such things as the restoration of the Beaumont memorial at Mackinac Island.

On the subject of the Beaumont House, let me express to you again the thanks of the people of Michigan for the preservation of this historic spot where Dr. William Beaumont did his invaluable work on the human digestive process. And let me say that I hope your action in restoring the Beaumont House will be an example to other public-spirited groups.

Soon we will open, at the Straits of Mackinac, the world's greatest bridge, a testimonial in steel and concrete to the spirit of the people of Michigan. The presence of that mighty bridge is certain to attract many more people to the Straits area which is so rich in the history of Michigan and America. I hope that Beaumont House will be only the first of many such projects, designed to preserve in authentic restoration, the historical importance of this crossroads of adventure, exploration, religion and commerce.

It was a pleasure to recognize the job done on the Beaumont Memorial project by appointing one of its leaders, Dr. A. H. Whittaker, to the Mackinac Island State Park Commission.

There are many other areas, I am sure, in which the medical profession has demonstrated its deep concern for the public good, and its willingness to carry out the special responsibilities of doctors as one of our most influential and important citizen groups.

My suggestion to you tonight can be put in the form of a simple question: Couldn't we have a little more of this? Couldn't we merge together these two conflicting images which the profession presents to the public—the image of the individual doctor, kind, self-sacrificing, deeply concerned with his patient as a human being and a friend; and the image of the organized doctor who all too often seems to appear to the public in a far less favorable light?

This question I raise not in a spirit of criticism, but on the contrary, in the hope that the public problems of the people of Michigan will receive more and more of your attention. That hope I express for two reasons: first, because there are many public problems which literally cannot be solved without your counsel and co-operation; and secondly, because, in my own experience, whenever doctors, working as citizens and with other citizens, have given their attention to public affairs, they have always emerged as able, devoted and effective public servants, who have helped greatly to develop programs beneficial to all the people.

The greatest of those problems which I say can't really be solved without your help, are in the field of public health. Last year I appointed a Michigan Public Health Study Commission, to which a number of eminent doctors gave their time and effort generously. This commission returned a set of twenty-three recommendations for the improvement of public health, and it is my understanding that many of these recommendations have received endorsement in principle by the Medical Society.

Specifically, I suggest to you that you review the report and recommendations of the Public Health Study Commission, and give us your best and latest thought on the questions dealt with. These problems of public health must be met. We cannot sweep them under the bed. We may honestly differ about how to meet them—but we can be sure that we cannot meet them properly and adequately without the counsel and co-operation of Michigan physicians.

In approaching public problems which have medical aspects, let me assure you that the counsel and co-operation of the medical profession will be eagerly welcomed by my administration. And to make clear what I mean by that, let me give you two pledges:

First, that as long as I have anything to say about it, the public policy of this state shall zealously guard and protect the personal relationship between doctor and patient, and the freedom of the patient to choose his own doctor.

And, secondly, that on any matter which affects the medical profession, the counsel and advice of representatives of the profession will be sought—as I have always sought it in the past—and will be given the fullest consideration.

Address of Welcome

By Congressman Gerald R. Ford, Jr.
East Grand Rapids, Michigan

It is a very real privilege and honor to join with Dr. Moleski to welcome you as delegates to this 92nd annual convention, on behalf of the City of Grand Rapids and the immediate surrounding area.

Grand Rapids, as you who have been here before know, is proud of its community. We think we have the outstanding convention facilities in the State. We are mighty proud of our other facilities, such as the hotels and the people who are attached to them. We are most proud of the fact that the people of Grand Rapids are delighted and pleased to have you people as our guests.

I should also like to say that the City of Grand Rapids and surrounding territory is proud of the medical profession that serves all of us. The Kent County Medical Society is one of the outstanding in the State. They do a wonderful job not only in serving the people professionally, but they have done a superb job in broadening their base and doing things community-wise which are important as we move along from day to day.

Sometimes it is said (I don't happen to concur in it) that doctors are too tied up with their needed and essential work to participate in the activities that make a city or a state better in which to live. I do not believe personally that the medical profession is any different from any other group. I think all of us could expand and improve our relationships with the community as a whole, and it has been my observation in the nine years that I have had the privilege of representing this area in Congress that the medical profession has done a better and better job from year to year in participating in community activities, in fighting for and accomplishing things in the area of good causes.

As all of you know, a group of your Michigan State Medical Society goes to Washington annually, in May. They meet with the members of the House and Senate from our State. They are one of the few groups that go there who have a breakfast at eight o'clock in the morning. They are always there, usually ahead of the members of the Congress, and we sort of straggle in anywhere from eight to eight-thirty. Those who go and represent you at that meeting, in my opinion, do a constructive job in presenting your individual problems to the members of the House and Senate from the State of Michigan.

I hope that this tradition, which has been built up of late, will continue and will expand. We in the Congress benefit from it, and I hope and trust that the Society as a whole does likewise.

If I might add just one word on a serious note: It happens to be my responsibility in the Congress, and has been for five years, to be a member of the Committee on Appropriations, which has the responsibility of making funds available particularly to the Army, Navy and Air Force. In that responsibility, I have seen in the last five years the tremendous sums of money which are made available to the technical-scientific personnel in the three branches of the service for research and development. Those of you who are familiar with it know the almost unbelievable advances which have been made scientifically and technically for the benefit of our country, and in this area it is not only for destructive but for constructive purposes, all related to our national security.

Direct appropriations for research and development for the Army, Navy and Air Force have averaged about $1,500,000,000 yearly; if you add to it the overhead, and so on, which is not chargeable to the direct appropriation, it amounts to over $3,500,000,000 a year for just research and development for the military.

As we see the things that are coming now into use that are the direct result of this technical development, such as guided missiles, and now the results in the antimissile missile, which is closer than we think, we wonder this: Have we as a country and as a citizenry prepared ourselves to handle, in our day-to-day living, in our governmental operations, the society in which we are bound to live technically in the years before us?

(Continued on Page 637)

Presented to the MSMS House of Delegates, Grand Rapids, September 23, 1957.

Detroit Surgical Association

ABSTRACTS OF PAPERS PRESENTED AT RECENT MEETINGS

Meeting of September 23, 1957

CLINICAL EVALUATION OF AN INTRAVENOUS FAT EMULSION

By Carl Birkelo, M.D., and
Wayne W. Glas, M.D.

An intravenous fat emulsion was administered to thirty-nine patients. These patients were then followed with reference to weight gain, toxic reaction and liver function tests. Some of the patients showed marked improvement in their nutritional status, however, several of the patients also showed some toxic reactions and impairment of liver function.

It was concluded that the intravenous fat emulsion could be administered with caution in selected cases.

PRESENT STATUS OF SURGERY FOR PULMONARY TUBERCULOSIS

By Richard Jankoska, M.D., William Tuttle, M.D., and Raymond Barrett, M.D.

Statistics for the City of Detroit show that there were 238 more cases of pulmonary tuberculosis discovered in 1955 than there were in 1945. However, the death rate per 100,000 population has decreased from 40.3 to 9.6 in the same ten-year period. This reduction in death rate has been due to the introduction of the anti-microbial drugs, especially Streptomycin and resectional surgery.

The decrease in the death rate is not due to a decrease in the severity of the disease since there were 21.6 per cent new cases in 1955 classified as far advanced as compared to 20.1 per cent in 1945.

Thoracoplasty and resection are the principal methods of surgical treatment of pulmonary tuberculosis with 30 of the former and 232 of the latter being performed at Herman Kiefer Hospital in 1955. Pneumonectomies have decreased eight fold from 1950 to 1955 while segmental and wedge resections have increased three and one-half fold.

The three most common complications in 232 resections were bronchopleural fistula with empyema, 6.8 per cent; persistent space, 4.6 per cent and wound infection 6.4 per cent. There were six deaths in the 232 resections for a mortality rate of 2.5 per cent.

FUNCTIONAL PARTIAL INTESTINAL OBSTRUCTION WITH REVERSED JEJUNAL AND ILEAL SEGMENTS

By John R. Slater, M.D.,
Robert Baruch, M.D., and
Robert M. Whitrock, M.D.

Using dogs for subjects, one foot long segments of ileum and jejunum were reversed. For control, single loops of ileum and jejunum were isoperistaltically transposed. Four experimental groups were:

1. Ileal loop reversed in ileum
2. Jejunal loop reversed in jejunum
3. Ileal loop reversed and transposed to jejunum
4. Jejunal loop reversed and transposed to ileum

The first three groups produced a mild degree of intestinal obstruction with tapering of the loop, dilatation being present at the proximal anastomosis and in the proximal small bowel. The fourth group exhibited rather marked partial obstruction with extensive spindle-shaped dilatation and tendency to perforation at the proximal anastomosis.

It was concluded that in a one month period the reversed segments maintained their original direction of peristalsis. It was also shown that the jejunum had greater relative activity than does the ileum.

Meeting of October 28, 1957

CARCINOMA OF THE CERVIX IN THE THIRD DECADE

By John T. Rogers, M.D.

The author had the opportunity to examine more than 4,000 females under thirty years of age over a twelve-month period of time. Cervical smears were obtained and if positive, biopsies were performed. Twenty-five cases of carcinoma of the cervix were found in patients under the age of thirty.

No attempt was made to discuss methods of treatment. The importance of suspecting carcinoma of the cervix in the young female was stressed.

EXPERIMENTAL RESECTION AND REPLACEMENT OF THE THORACIC TRACHEA

By L. A. Tomatis, M.D., and
Rodman E. Taber, M.D.

Department of Surgery, Henry Ford Hospital, Detroit, Michigan

Many types of artificial tracheal substitutes have been utilized experimentally and clinically to replace the resected trachea. A common fault of most of the substitutes has been the development of stenosis at the junction of the replacement and the trachea. In an attempt to avoid this complication we have developed a prosthesis constructed of Ivalon sponge encasing a stainless steel spring. After partial excision of the thoracic trachea, the tracheal ends are sutured to the prosthesis over a small stainless steel band. The latter feature has been designed to prevent the development of stenosis at the suture lines.

This technique of resection and replacement of the dog's trachea was demonstrated with slides and the post-operative results discussed.

A clinical case in which this operative procedure was utilized was described.

A REVIEW OF THE CASES OF TETANUS AT DETROIT RECEIVING HOSPITAL, 1952-1957

By William J. Kelly, M.D.

Fifteen cases of Tetanus are presented from Detroit Receiving Hospital in the last five years with a 33.3 per cent mortality. Three of the five fatal cases were associated with open fractures. There were seven cases associated with puncture wounds. There were no cases where the site of origin was not obvious and there were no cases associated with elective surgery. The distribution was about equal between males and females and the ages ranged from 3 years to 67 years. There were no cases associated with previous immunization, and there were four cases that had received the routine so-called prophylactic dose of 1,500 units ATS. Positive cultures for Clostridium Tetani were obtained in 20 per cent of the cases.

The treatment consisted of local wound care, Penicillin, relaxants or curare-like substances, tracheotomy where needed and general supportive care.

Few conclusions can be drawn from such a small series, but it was the impression that a tracheotomy should be done sooner and more frequently than has been reported in this series.

Meeting of November 25, 1957

SEGMENTAL FRACTURES OF THE TIBIA

By John Youngs, M.D., and
Maurice Castle, M.D.

Nine cases of segmental or butterfly fractures of the tibia were presented by the authors. With this difficult type of fracture, immediate bone grafting using ground-up bone chips from the minor fragment were attempted. The results were found to be as good or as superior to immobilization with screws or plates. The healing period varied from six to twelve months. There were no cases of non-union.

ADRENOGENITAL SYNDROME—CASE REPORT WITH 22-MONTH FOLLOW-UP

By Ward M. Smathers, M.D., and
Sander P. Klein, M.D.

A case of the adrenogenital syndrome in a 34-year-old woman was reported. Clinical signs of the syndrome and laboratory findings, particularly 24-hour excretion of urinary 17-ketosteroids were given along with a discussion of the treatment.

This particular patient had a very wild carcinoma of the left adrenal with vascular invasion. When first seen she demonstrated facial hirsutism, an enlarging clitoris, cessation of menses, change in weight distribution and male pubic hair distribution.

All of these conditions reverted to normal within three months of removal of the adrenal tumor and there has been no evidence of recurrence of the tumor.

TREATMENT OF BURNS OF THE HAND

By Martin Katz, M.D.,
Donald Kapetansky, M.D., and
Joseph Posch, M.D.

*Department of Surgery,
Detroit Receiving Hospital*

The authors presented more than forty cases of burns of the hand. Open and closed methods of treatment were discussed and the prevention of infection was emphasized. Early skin grafting was commented upon and reconstructive procedures consisting of split-thickness skin grafts and pedicle grafts were illustrated. In almost all cases multiple surgical procedures were required.

Meeting of January 27, 1958

HISTOPLASMOSIS—A DIAGNOSTIC PROBLEM

By Harold Bartko, M.D., and Robert Webster, M.D.

This paper was based upon several case studies and stressed the ability of the disease to mimic lesions which are responsive to surgical treatment.

Etiology of the condition was discussed and several thoracic surgeons commented upon the frequency with which the lesion occurs in the lungs. The predilection of the disease for the mouth and anus was mentioned. An unusually interesting case of histoplasmosis producing lesions throughout the entire digestive tract was presented with color slides which very effectively demonstrated the lesions in the small intestine.

A PRELIMINARY SURVEY OF THE INCIDENCE OF CANCER OF THE RETAINED CERVICAL STUMP

By Charles Darling, M.D.

This paper dealt with the evaluation of carcinoma of the cervix in 17.000 women examined at the Yates Memorial Clinic in a five-year period from May, 1951 to May, 1955.

The incidence of women having undergone supra-cervical or total hysterectomy is discussed and a comparison was made between the incidence of carcinoma in the retained cervical stump as against the incidence of carcinoma in cervices in which the body of the uterus is intact. In this large series of cases it was found that there was practically no difference between the incidence of carcinoma in the retained cervical stump as against carcinoma in the cervix in which the body of the uterus is intact. This was in contrast to previously accepted opinion that carcinoma of the cervical stump was two to four times as prevalent as carcinoma in the cervix of the intact uterus.

CHORDOMAS—PRESENTATION OF THREE CASES

By Robert G. Borchak, M.D., and Leonard VanRaaphorst, M.D.

Chordomas are unusual tumors of notochordal origin which may occur anywhere along the cerebrospinal axis from the sphenoid to the coccyx. They are generally malignant.

In the past, surgical treatment prior to 1940, has been little more than biopsy. Details of successful surgical extirpation of the tumor and lower sacrum and coccyx with preservation of rectal and vesical function in one case were presented. Slides of the gross, microscopic, and x-ray appearance pre and postoperatively were shown.

THORAZINE JAUNDICE

(Continued from Page 586)

References

1. Hanger, F. M., Jr., and Gutman, A. B.: J.A.M.A., 115:263-271, 1940.
2. Gargill. S. L., and Lesses, M. F.: J.A.M.A., 127: 890-898, 1945.
3. Werner, S. C., Hanger, F. M., and Kritzler, R. A.: Am. J. Med., 8:325-331, 1950.
4. Denber, H. C. B.: J.A.M.A., 158:586, 1955.
5. Moyer, J. H., Kent, B., Knight, R. W., Morris, G., Dizon, M., Rogers, S., and Spurr, C.: Am. J. M. Sci., 228:174, 1954.
6. Boardman, R. H.: Brit. M. J., 4887:579, 1954.
7. Zatuchni, J., and Miller, G.: New England J. Med., 251:1003, 1954.
8. VanOmmen, R. A., and Brown, C. H.: J.A.M.A., 157:321, 1955.
9. Moyer, J H., Kinross-Wright, V., and Finney, R. M.: AMA Arch. Int. Med., 95:202, 1955.
10. Seager, C. P.: Brit. M. J, 4918:882, 1955
11. Hodges, H. H., and LaZerte, G. D.: J.A.M.A., 158:114, 1955.
12. Lemire, Jr., R. E., and Mitchell, R. A.: AMA Arch. Int. Med., 95:840, 1955.
13. Hartnett, B. S.: Brit. M. J., 4928:1458, 1955.
14. Cohen, I. M., and Archer, J. D.: JA.M.A., 159: 99, 1955.
15. Gold, H., Rosenberg, F., and Campbell, W.: Ann. Int. Med., 43:745, 1955.
16. Peterson, R. E.: J. Lab. & Clin. Med., 39:225, 1952.
17. Morritt, E. R., et al: Gastroenterology, 28:901-903, 1955.
18. Diches, Robert, et al: New England J. Med., 256: 236 (Jan. 3) 1957.
19. Hiles, Bettie W.: J.A.M.A., 162:1651 (Dec. 29) 1956.

Editorial

PROGRESS IN THE DETECTION AND TREATMENT OF CANCER

In reviewing the progress of the profession to surround the area of cancer during the past few years, it is heartening to note that where only a short while ago the belief that early diagnosis and treatment of cancer enabled the curing of 25 per cent of those having the disease, today it is almost 33.3 per cent. If it were not for the marked increase of cancer of the lung, the rate of cure would be greater. While this percentage may not seem adequate for what research has occurred during this period, still it is in the ascending phase and encouraging. To put it in the vernacular of baseball, what manager would not be delighted to obtain a 333 per cent hitter to replace one whose average is 250 per cent.

From many places, reports of various types of research all point to a gradual closing-in on all sides; for instance, the recent findings of a Western research group who developed a newer manner of early gastric diagnosis by stomach lavage. Studies by a scientist at the University of Washington have indicated that many digestive tract cancers may be detected while they are in an early and curable stage. The method involves washing out the digestive tract and microscopically searching the sediment for tell-tale cancer cells. Extensive studies by his group have indicated that early cancers and even precancerous conditions may be found by these methods. Hidden cancers—like those of the stomach—have a low cure rate. Of the procedures developed for detecting stomach cancer, one called "chymotrypsin lavage" has been found in practice to be the simplest and most dependable. This calls for inserting a narrow tube into the fasting stomach, withdrawing the contents, pouring in a solution containing chymotrypsin and, after ten minutes, withdrawing it and examining the sediment under the microscope. The enzyme chymotrypsin dissolves the mucus which coats the stomach lining, loosening cancer cells from its surface. This method showed up nineteen of twenty stomach cancers in one series. Other measures, some of them in early experimental stages of development, promise to improve diagnosis in other areas of the digestive tract.

Recently, Dr. Warren H. Cole, head of the department of surgery at the University of Illinois, stated he believed the outlook for conquering cancer through the fields of chemotherapy and immunology was "very optimistic." In this generation, he states, perhaps we may see the development of a drug to cure one type of cancer, namely, that of the breast. Eventually, Doctor Cole thinks science will produce a vaccine to prevent cancer or an anti-toxin agent to kill cancer cells that are already present in the human body, or perhaps both. Doctor Cole reports that for some time he has examined cancer patients for cancer cells circulating in the blood. If the cancer cells are few or not present, the patient's chances of cure by surgery are good; if there are cancer cells present in any appreciable amount, the outlook for a surgical cure is dim. In five years of research in his clinic, he and his assistants have found floating cancer cells in a surprising number of cancer cases: 15 per cent in curable cases and 35 per cent in incurable patients.

Doctor Cole's group also has been irrigating wounds with chemicals in animals that have been inoculated one hour previously with cancer cells. This is to destroy cancer cells dislodged into the bloodstream during operations. One of these drugs giving favorable results is Chlorpractin.

In further attacks on cancer, the works of Sir Stanford Case of London on the role of adrenalectomy in cancer of the breast and that of Dr. Rolf Luft of Stockholm on the place of hypophysectomy also in cancer of the breast have been enlightening.

On another front, the startling news recently reported by the American Cancer Society of the work at the national cancer institute, Bethesda, Maryland, by Dr. Ray Hertz, who reported that a number of women with advanced cancers have been receiving an anti-cancer chemical for two years, is exciting.

He stated that cells of one particular type of cancer were duped into committing suicide by absorbing a chemical closely resembling a vitamin they needed for growth. The cancer studied is a hormone-producing tumor called choriocarcinoma. It occurs in women during the child-bearing process, originating from what normally would

Cancer Control

This month we are featuring articles devoted to the subject of Cancer, the medical and scientific aspects of the disease. We are pleased with the high quality of the manuscripts and are thankful to the authors for their cooperation with our Editor.

Throughout the year, the Michigan Cancer Coordinating Committee is actively serving the profession and the public, and I should like to commend their efforts. This committee was created November 12, 1953 as a voluntary, co-operative effort of the several state agencies interested in cancer. They were:

American Cancer Society, Michigan Division, Inc.
American Cancer Society, Southeastern Michigan Division
Michigan Department of Health
Michigan Health Officers Association
Michigan State Dental Society
Michigan State Medical Society

Cancer education, through the use of various media, has been prominent since the committee's inception. They also have helped to develop and maintain a more efficient and effective, complete dynamic cancer control program in Michigan. They have actually acted as "stimulators" to their respective member organizations in an all-out fight against cancer.

The committee's efforts have been fruitful; results have been good; but its members are the first to caution us that much is yet to be done. The help of each of us is needed to continue the fine work carried on by this group of dedicated individuals.

Geo. H. Slagle.

President, Michigan State Medical Society

President's



Message

be the after-birth or placenta. Such cancers, generally rare, spread rapidly through the area and then invade the lungs and brain. They usually kill the patient within a year.

Doctor Hertz stated that the vitamin folic acid is necessary for normal enlargement of the womb during pregnancy. The developing embryo also requires folic acid in great abundance to survive. Investigators believed the cancer also would require folic acid. Researchers developed chemicals so similar to folic acid that they take a special place in the body's cells and crowd out the vitamin.

One group used a compound called methotrexate, known as a vitamin antagonist. This chemical was taken up by the human cancer cells requiring an abundance of folic acid and they soon died. The normal body cells requiring less folic acid were unharmed.

Doctor Hertz said that sixteen women with far-advanced choriocarcinoma have received this methotrexate therapy for two years. Six of them have remained completely free of evidence of disease on the basis of x-ray and physical examinations and tests for the hormone the cancer would release in the urine. Five others showed good response and are free of symptoms. Three showed "decisive original response" and are continuing with the therapy. Two died of the far-advanced disease in the early phase of treatment.

Dr. John R. Heller, director of the national cancer institute, discussing this work and the future possibility of a chemical cure for cancer, states "a solid tumor has apparently been completely suppressed by drug treatment for the first time, offering the possibility that this may be a definite break-through in chemotherapy research. If methotrexate works with choriocarcinoma, there is reason to hope and expect that this and other compounds will work with other forms of cancer."

Dr. Charles B. Huggins, director of the Ben May Research Laboratories of the University of Chicago, adds a very interesting note that 40 per cent of cancer patients can now be benefited in ways not possible ten years ago.

With the research wheels going round and round, constantly narrowing the periphery of the cancer problem, it is possible that the final squeeze is not too far off; therefore a hopeful or positive outlook on cancer is in the picture with greater force than at any time heretofore.

With this gradual brightening of the picture, the unscrupulous who prey on the bewildered and the uninformed whom cancer strikes, and who have been glorified by the term "charlatans," are also being squeezed out of the picture, and we hope into permanent oblivion, by the education of the public through the profession, the governmental agencies, and others interested in the eradication of cancer.

W. A. Hyland, M.D.
Cancer Committee, MSMS

THE MICHIGAN MEDICAL CARE PROGRAM

Michigan Medical Service, through its administrating personnel, insurance experts and staff, has developed a completely new program for the medical care of people of our state. Every suggestion developed by the Opinion Study Report and the suggestions made as a result of two years' work by the two study committees (the Slagle Committee and the Owen Committee), as reported to the House of Delegates by Dr. Max Lichter's reference committee and unanimously adopted, has been incorporated in the new basic policy. The final policy or contract was submitted in detail to The Council at its annual meeting January 30–February 1, 1958, minus the final actuarial figures not then completed but approximated. This report was accepted by The Council unanimously.

The Michigan Medical Service Board of Directors also accepted the format and report, leaving open for last minute, final determination the rates to be charged. These rates have just been determined and approved and the contract presented to the State Insurance Commissioner. His approval will be the final act in making available to the State of Michigan and to all of our subscriber groups who wish to be served by the most complete and comprehensive medical care program ever developed or offered by a physician sponsored plan.

The House of Delegates, in September, 1957, pledged to our people a policy completely exemplifying the desires which they had expressed in the Opinion Study Report, and to our members the type of policy they had indicated in their replies to this Survey. A completely new method of determining fees to be paid for services has at last been developed. Michigan studied this relative value plan more than twenty-five years ago, but at that time found trouble in co-ordinating it.

California studied the policy for many years and arrived at the conclusion which we had previously done in Michigan that no one listing of services and their relative values would be possible. California physicians established and published four values and have been revising their listing ever since its first acceptance. The Michigan Medical Care Insurance Committee has charge of this work and is in the process of making revisions as we find them applicable in Michigan. This standing committee on prepaid insurance, authorized by the House of Delegates, has meticulously studied every movement and sentence placed in the contract which has been written. Not a concept has gone in without their consent.

It has been the duty of Michigan Medical Service, since its inception, to serve the wishes of the Michigan physicians in such a fashion as to attract the approval of the general public, labor, management, farm groups, and others. The Michigan State Medical Society, through its various committees and organizations, including the House of Delegates and The Council, has carried out through Michigan Medical Service the instructions given in the public and physician opinion survey. The whole United States is watching the results of this program.

A new method of determining income limits is provided. The doctor can tell at once whether his participating agreement applies to the individual seeking his services. The CHA program being developed under the leadership of the UAU-CIO is being answered in this new policy and by the physicians of Michigan.

Labor has been preparing to give its members and others who wished to join, a complete medical service without extra charges and has established the Community Health Association with the objective of serving its subscribers by the use of closed panel doctors on salary as referred to in a report in this number of THE JOURNAL. (See page 609.)

The medical profession has pledged and must carry out our promised program. If abuses or failure should result—if the profession can not deliver what it is promising, there is only one future for the practice of medicine. If our Blue Shield program, as now modernized, should fail, the Community Health Association or some other plan would attempt this service, but the ultimate result would be government medicine on the theory that the profession itself had failed to carry out its promises. We would then either work under the program as operated by Community Health Association or some other closed panel group, or that failing, the government must step in and administer medical services to the people.

SOME FORGOTTEN HISTORY

The Council of the Michigan State Medical Society, at its annual meeting, January 30-February 1, 1958, received a resolution from The Council of the Michigan Society of Internal Medicine reading:

"The Michigan Society of Internal Medicine is firmly convinced that whenever any agency of the federal or state government assumes responsibility for the medical care of any group in our population, that such a group shall not be considered as medically indigent, and that the fair and standard fee based on the relative value fee schedule, with a unit value of 5 shall apply, subject to modification according to the rise or fall of the cost of providing professional services."

This question of not being indigent was officially resolved by the Michigan State Medical Society in February, 1945, by the Executive Committee of The Council. The House of Delegates, at its meeting in September, 1945, approved a new statement of position with regard to the caring for wards of the government. The statement is:

"It is the opinion of The Council, approved by the House of Delegates, that wards of the government are not indigent. The government, their foster parent, is not indigent."

A committee was formed, with Robert L. Novy, M.D., as chairman, to work out a fee schedule. After a tremendous study, the Michigan Uniform Fee Schedule for Government Agencies was issued with this note:

"This minimum uniform fee schedule has been officially adopted by the Michigan State Medical Society for wards and dependents of government, effective January 1, 1946."

This action was published in THE JOURNAL editorial section in November, 1945, page 1216.

The fact that Michigan had this schedule in operation was the final argument which sold the Veterans Administration the Michigan Home Town plan for care of service-connected, ailing veterans.

DIVIDED WE FALL

During the years that Michigan Medical Service has been in operation, and that other Blue Cross-Blue Shield programs have functioned throughout

the nation, the policies and programs have very closely followed the principles laid down by the organized, recognized medical societies representing the whole profession, which were sponsoring these plans, which were rendering an untold service to our public by staving off political medicine, and which were assuring the public that medical service under privately sponsored activity could be rendered. There have always been larger or smaller groups who have not co-operated. Fortunately a sufficient number did conform to make the programs acceptable.

Essentially, the Blue Shield units almost completely covering the nation were able to carry on, all of them giving services under different regulations and in different amounts.

The demands of the public have been constantly increasing and within the last two or three years it has become evident that the public demanded a much more comprehensive basis of protection. The Michigan State Medical Society and Michigan Medical Service have completely modernized the Michigan concept and are now able to offer to group subscribers throughout the state just about any amount of coverage which they desire. An attempt has been made to set up a relative value fee schedule which is as all inclusive and as applicable as is possible. The contract is about ready to be placed on sale and to its subscribers it carries the guarantee expressed by the House of Delegates that our members will conform to the specifications, give the service, and accept the fee when the subscriber is within the prescribed income limit.

This schedule of fees has been established in an attempt to equalize all values and pay each group adequately and fairly. These schedules are the result of many years of study in many areas of the country. They are based upon the California Relative Value Fee Schedule and upon the Michigan studies of a hard working committee which has brought that schedule up to the Michigan requirements.

Eighteen years ago, when Michigan started the Blue Shield movement, the Commissioner of Insurance would only issue a permit when the society demonstrated to him that a sufficient number of our membership would cooperate to assure that the public would have no trouble in receiving the promised attention. Eighty-two per cent of participation at that time was accepted and approval granted. It is hoped that the new program which we are now establishing will receive at least that much participation. If that be true, the principles established by the House of Delegates in September, 1957, will be carried out.

In the past, there has been no distinction, either publicly or privately, between the participating and the non-participating doctors. Each has been paid the scheduled fee directly. The participating doctors, through their guaranteed service have made our program possible. The non-participating ones have accepted our fees as an indemnity, 100 per cent collected automatically. Under the new program, there will be a distinction, payments to non-participating doctors will be made through the patient, the same as any indemnity company, but assignments to the doctor will be recognized.

The success and continuation of the whole concept of voluntary non-profit, pre-payment medical service, as exemplified by the Blue Shield program, depends in ever-increasing measure on the unanimity with which the promises are fulfilled. The eyes of the nation are upon Michigan. The period of trial is here. Will the verdict be "Well done?"

TAX DEDUCTIBLE CONTRIBUTIONS

American Medical Education Foundation

There are several worthwhile contributions which our members could keep in mind or could pass on to their enquiring patients. We have been urged repeatedly for many years to contribute regularly to our alma mater or to medical education through the American Medical Association's Medical Education Foundation. Every physician owes a very great debt of gratitude to his medical school. None of them has ever contributed in fees and dues anywhere near the cost of his education. Those who can afford to are urged to remedy this defect with yearly contributions to help keep medical education as free from political domination as possible. Those with limited means can always spare a small amount. It was estimated a few years ago that our medical schools need about $10 million more than their present income in order to insure their proper efficiency as teaching centers. An average of $25 per medical member would go a long way toward relieving this stress.

Michigan Foundation for Health Education

When this Foundation was established one of its express purposes was to attempt to stimulate young medical students to locate in the more sparsely settled areas with a population of 5,000 or less. The Foundation has a rotating fund being used and is also sponsoring a number of other health education programs. The Foundation has made no concerted drive to raise more money recently but is always receptive. Wm. LeFevre, M.D., Councillor of the Michigan State Medical Society from the Muskegon district, has suggested that our members adopt a policy of making a contribution to the Foundation or to any other fund in which they are interested, as a birthday present. Send the check out on your birthday to The Michigan Foundation for Health and Medical Education, Inc., 606 Townsend Street, Lansing.

Cancer

The American Cancer Society, Michigan Division, for many years has raised money for numerous purposes. It has supported research on the control and cure of cancer. It has been the wish expressed by many people, in the case of a loved one dying from cancer, that in lieu of flowers, a donation be made to the cancer fund. This is especially appropriate. Just a hint from the doctor to the afflicted family will frequently result in a surprisingly large amount to this good cause, and a feeling of gratitude from the bereaved family. These donations are best made to the local Cancer Society, or may be sent to the American Cancer Society, Michigan Division, 1205 East Saginaw Street, Lansing 6.

Michigan Heart Association

This is another lay organization interested in the health of our community. It raises money through donations and is a member of the United Fund or the Red Feather program in various areas. It has helped the Michigan State Medical Society with rheumatism programs and centers. It has co-operated with us for several years in the January number of our JOURNAL. This is another opportunity for our well-disposed members to join, to contribute, to remember on their birthdays, and to remind their patients with the same suggestions in the case of deaths from heart disease. Flowers in such cases are always acceptable, but instead or in addition, an appropriate memorial to the Heart Association is very satisfying and many of our families will thank us for having made the suggestion. Michigan office is in the Doctors Building, 3919 John R. Street, Detroit 1.

Beaumont Memorial

The Beaumont Memorial Foundation, established and incorporated through the efforts of the Michigan State Medical Society Beaumont Memorial Committees during the last year, held its first annual meeting in Detroit, January 30, 1958. The Michigan State Medical Society had a more or less active committee on Beaumont for a great many years, and about ten years ago, the "Early House" was acquired. Within the last four or five years, a very active committee accomplished the restoration and reconstruction of the building in its original form, secured some period furniture, some relics, some applicable books and under final agreement, turned the building over to the Mackinac Island Commission. There are, however, many other things to be done and certain upkeep and expenses to be met. To continue the interest of the medical profession in this very outstanding monument to medical progress and to assure further accomplishments, the Society organized the Beaumont Memorial Foundation, which it invites all of our members to join at an expense of $5 per year, or $100 for a life membership. This project deserves our continuing support.

LYMPHOSARCOMA OF THE GASTROINTESTINAL TRACT

(Continued from Page 558)

Irvine, W. T., and Johnstone, J. M.: Lymphosarcoma of the small intestine. Brit. J. of Surgery, 42:611 (May) 1955.

Joyeux, R., Courty, A., and Bertrand, L.: Lymphosarcoma. LaSemaine des Hopitaux de Paris, 27:1008 (March) 1951.

Wuidarty, P. L.: Occlusive lymphosarcoma of the small intestine. La Presse Medicale, 59:467 (April) 1951.

Crile, George, Hazzard, John B., and Allen, K. L.: Primary lymphosarcoma of the stomach. Ann. Surg., 135:39 (Jan.) 1952.

Bockus, Henry L.: Gastro-enterology. Philadelphia: W. B. Saunders Company, 1946.

Akerman, Loren V., and DelRegato, Juan A.: Cancer. St. Louis: C. V. Mosby Co., 1947.

Boyd, Wm.: Surgical Pathology. Philadelphia: W. B. Saunders Company, 1946.

122 Grant St.
Niles, Michigan

Prepaid Medical Care Plans Committee

(A Committee of the Wayne County Medical Society)

Meeting of December 13, 1957

Present.—G. Thomas McKean, M.D., Acting Chairman; Charles Anderson, M.D., T. A. Boutrous, M.D., R. C. Buerki, M.D., Sidney Chapin, M.D., Roger DeBusk, M.D., E. H. Fenton, M.D., Rosser Mainwaring, M.D., Ralph Pino, M.D., A. Z. Rogers, M.D., Arthur Schiller, M.D., and Charles Stevens, M.D. Also present: L. J. Bailey, M.D., Clarence Owen, M.D., F. P. Rhoades, M.D., F. D. Mott, M.D., and Lynn Rosenfeld, M.D.

Purpose of Meeting.—Dr. McKean reported that the purpose of the meeting was to discuss the Community Health Association program with the Medical Director, Dr. Mott, and his assistant, Dr. Rosenfeld. He asked Dr. Mott to outline the plans of the C.H.A.

Community Program.—Dr. Mott explained that he had only been in Detroit a few months and had spent a great deal of his time getting acquainted with the community in order that he would know the medical resources. Dr. Mott emphasized that the objective of the Board of Directors of the C.H.A. is to develop a community program integrated as far as practical and feasible with the medical profession and the local hospitals. He pointed out that the Board does not want to divide the profession or set up splinter groups. For example, the Board does not look with favor on health programs developed by union locals.

Dr. Mott felt that the C.H.A. program could be developed as a part of the medical community and pointed out that both have the same objective —to enable people to get broad and good benefits on a prepaid basis. The main difference in opinion comes in approach, but Dr. Mott hoped that these differences could be minimized so that they could work together.

Also, he emphasized that it is a community program from the standpoint of the patients. The Board does not want it confined to labor but is interested in developing a plan that will be available to any individual. He admitted that the original impetus for the program came from the union and some of the financial support. However, he explained that the C.H.A. has also borrowed money from some of the foundations and plans on repaying all its loans including those from the union. He advised that the Board of Directors represents prominent people in the community and that it will be expanded to include more physicians. He did not think that the present Board would be interested in a union plan only.

Principles.—Dr. Mott outlined some of the principles laid down by the Board of Directors—prepayment, comprehensive service, group practice, free choice, medical direction and leadership, and, wherever possible, utilization of existing community hospitals.

Free Choice.—There was a long discussion about the question of free choice. Attention was called to the standards established by the State House of Delegates last September, one of which is free choice of physician. Dr. Mott stated that the Board of Directors is definitely committed to group practice. Medical service will be provided through organized group practice units. There will be a few exceptions for certain specialties. He emphasized that group practice is increasing and that the advantage of this type of practice is becoming increasingly obvious to physicians. In his opinion, the question of free choice of physician under such type of practice is merely a point-of-view; the group practice method does provide free choice. An individual will have free choice whether he wishes to come into the plan or not, and he is free to leave at any time. Physicians are free to decide whether they wish to participate in the plan. Furthermore, each family will be assigned a family physician from within the unit. He stated that group practice is a good mechanism for elevating standards of medical care and that the Board is firm on this method of practice.

Dr. Bailey questioned it from an ethical standpoint—would not the union steward have a tendency to influence the employes to utilize C.H.A. and if pressure were used, it could be interpreted as solicitation. Also, if the participating physicians are permitted to have private patients, the element of solicitation can enter there too.

Dr. Mott explained that the plan followed in Permante and H.I.P. would probably be adhered to here. There, representatives from the various plans such as Blue Cross or C.H.A. appear before a meeting of the employes and explain the advantages of each plan. The employe is then free to select which plan he prefers.

Quality.—Dr. Chapin raised the question as to whether there was a need for developing a new plan in Wayne County. He also emphasized that in constantly stressing quality of medical care, the unions were implying that the present medical care is inadequate, which he seriously doubted. Dr. Mott advised that the Board had emphasized quality of medical care because it was the pattern of their thinking but without any implication

against the present care. He pointed out that, at the time C.H.A. was organized, there had been concern among the people for more comprehensive care and for service contracts, for the extra charges had been a cause of irritation among union members. Also, employes had seen what was available in other parts of the country and wondered if the same could not be provided for them. He emphasized that C.H.A. is interested in preventive medicine, rehabilitation, and health education. In his opinion, for good preventive medicine, the earliest possible detection is important and, therefore, there should not be any barriers such as deductibles or co-insurance. He pointed out that, even with the increase of prepayment, the average person intends to get better medical care. A three-year study on the H.I.P. patients has shown a definite improvement in perinatal records: Perinatal mortality was approximately 31 per cent lower for whites; 37 per cent lower for negros. He felt this had been accomplished because standards had been set, such as the requirement that a baby must be under the supervision of a pediatrician for three years.

Costs.—In answer to questions, Dr. Mott explained that he did not know what the exact costs would be but that it was planned to distribute them equally—50 per cent to employers, 50 per cent to employes and that total care would not include mental health and T.B. Based on the costs of other plans, Dr. Rosenfeld explained that the rates for H.I.P. for a family were $160.00; Permante $180.00. He agreed that these costs are higher than Blue Cross but the question is—Do people want this added coverage enough to pay for it? In his opinion, they would. Dr. Rhoades pointed out that if these costs are made a part of the annual wage contract, in the future, industry may pay 100 per cent. How can the average person then afford these rates? Dr. Mott admitted that he could not answer this question but stressed that the unions consider these benefits as wages.

Control.—In answer to questions from Dr. Schiller as to possibilities of control by unions or by government, Dr. Mott advised that in other areas such as in the Kentucky coal fields where he had helped develop the United Mine Workers program, and also in Saskatchewan, Canada, doctors at first had expressed similar fears but that these fears had proven unfounded. Physicians in both areas are pleased with the plans now. In regard to safeguards, he stressed that the medical standards will be set by physicians in hospitals and by a medical advisory committee to C.H.A.

Availability of Physicians.—Dr. Pino stressed that the C.H.A. cannot accomplish its broad objectives without sufficient physicians and questioned whether there would be enough to carry out the annual program such as the annual physical examination. Dr. Mott explained that one of the purposes of the program is to try to use the medical resources most efficiently and emphasized that the C.H.A. is a research program. He pointed out that medicine is constantly changing and that the profession must face its responsibilities. He stated that a recent study on utilization of beds in hospitals shows that under comprehensive programs there is a substantial difference in the number of hospital days—5.8 days under a comprehensive program as compared to 7.5 under Blue Cross. He advised that final interpretations are obscure but that it is possible that, by carrying out the work of medicine one step further and bringing about more co-operation, the medical resources may be used more fully.

Dr. Pino emphasized that the group should work together and that if an experiment was wanted, the union should have come to the medical profession, which has had this problem under study for thirty years and has valuable experience and information.

In answer to a question as to what effect such group plans as C.H.A. would have in the number of medical students, Dr. Mott and Dr. Rosenfeld admitted they did not know, but emphasized that doctors do reasonably well in these groups and have professional help.

Blue Cross.—When asked whether C.H.A. plans to set up its own insurance or use existing plans, Dr. Mott stated he didn't "think in insurance," and that he couldn't give a positive answer to where Blue Cross would fit in. However, he said he did not want to deal with hospitals through a middle man and, therefore, "We shall probably pay hospital bills from C.H.A. rather than Blue Cross."

The meeting adjourned at 2:00 p.m.

THE COMMUNITY HEALTH ASSOCIATION
Its Implications and Probable Effects

That the Community Health Association is no longer a theoretical threat to medical practice in the State of Michigan is evidenced by the presence at a recent meeting of the Prepaid Medical Care Plans Committee of Dr. F. D. Mott and Dr. Lynn Rosenfeld who represent the executive board of the Community Health Association and will direct its activities. Dr. Rosenfeld seems to be somewhat of a sociologist and with Dr. Mott helped establish the mine workers insurance plan and put it into

operation. Up to recently the Community Health Association seemed to be a nebulous thing which might spring into being on a maybe, if, or and basis and would not constitute a present threat, or if it did constitute a threat that its relationship with medicine would be such that they would operate with Blue Cross and Blue Shield or with any type of insurance which we in private practice deal with.

This is not so, even through Dr. Mott emphasized that the objective of the Board of Directors of the Community Health Association is to develop a *community* medical program integrated as far as practical and feasible with the medical profession in the local hospitals. He pointed out that the board does not want to divide the profession or set up splinter groups. He felt that the Community Health Association Program could be developed as a part of the medical community and pointed out that both had the same objective which was to enable people to get broad benefits on a pre-paid basis without co-insurance or deductibles.

He also emphasized that this was a community and not a union program for the benefit of the patient; that it would not be limited to labor, but would be available to any individual who desires it. He also admitted more or less as an aside, that the original impetus for the program came from the unions who furnished more or less the financial support. The Board of Directors represents prominent people in the community and the basic principles laid down were prepaid, comprehensive service, group practice, free choice, medical direction and leadership, and wherever possible utilization of existing community hospitals.

There is nothing in the above statement that is not laudible, that is not in the interest of the public, and that is not in the interest of good medicine.

Realistically I am deeply concerned about the formation and operation of such a plan here in Detroit and Wayne County. This plan in essence proposes group practice on a closed panel plan basis, and while it is stated that there is to be free choice of physicians, this free choice obviously has to be limited to members of the plan which naturally will include salaried physicians working for the plan which is covered by a new type of insurance.

It is a well known fact that closed panels can operate more cheaply than can the private physician and as Dr. Mott expressed it, free choice of physician under group practice is merely a point of view. Of course as he also stated, an individual would be free to leave the plan at any time.

Since it is the intent of the plan to have industry pay for half of the operative cost and the private individual the other half, it is common sense to suppose that an individual will think twice before leaving the plan. Again since each family would be assigned a family physician from within the unit it also means that this plan would be in direct competition with all of the doctors in the State of Michigan.

Dr. Mott stated that the plan followed the Permante Plan in California and H.I.P. in New York, would probably adhere to their principles, and since Dr. Mott comes from the mine workers group, in all probability some elements of their plan would be added to the C.H.A. Program.

Gentlemen, the introduction and operation of a plan of this type in Wayne County, means a type of competition that we have never before encountered in competitive private practice and because of its inherent features as described above, it presents a type of competition that we believe is not in the best interests of either the patient or the doctor.

It will present a definite problem to the Blue Cross and Blue Shield, for without industrial co-operation these plans cannot exist. It will represent a problem for the hospitals which according to their charters cannot refuse co-operation. It means the opening and operation of closed panel clinic groups which can be operated on the various corners and sections of our county. It represents the bargaining power of labor and industry with which the doctor cannot compete.

Couple this with the obvious intent to secure full medical insurance coverage, regardless of cost and who pays for it, as long as it is not the patient. We then have what represents this goal of increasing effort as evidenced by the Permante Plan in California, the H.I.P. in New York, the mine workers plan and the plans of various groups organized for the definite purpose of getting a low cost care, usually at the expense of the physician.

It should also be pointed out that these plans operate extensively as a community project, can eventually have such political repercussions that it may place medicine in the position of eventually facing federal control. If these plans encounter a depression that leaves them insolvent they undoubtedly will apply to the Federal Government for relief and that means State and Federal medicine.

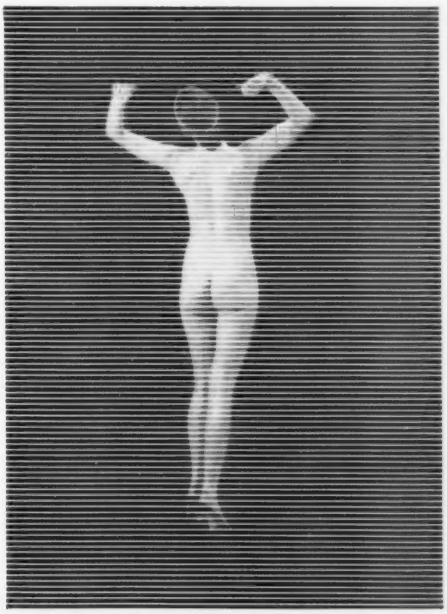
A. E. SCHILLER, M.D.

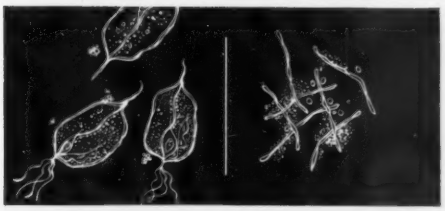
Approved by The Council, January 31, 1958.

CHEMOTHERAPY PLUS FLORA CONTROL

Floraquin®

Destroys Vaginal Parasites
Protects Vaginal Mucosa







Vaginal discharge is one of the most common and most troublesome complaints met in practice. Trichomoniasis and monilial vaginitis, by far the most common causes of leukorrhea, are often the most difficult to control. Unless the normal acid secretions are restored and the protective Döderlein bacilli return, the infection usually persists.

Through the direct chemotherapeutic action of its Diodoquin® (diiodohydroxyquin, U.S.P.) content, Floraquin effectively eliminates both trichomonal and monilial infections. Floraquin also contains boric acid and dextrose to restore the physiologic acid pH and provide nutriment which favors regrowth of the normal flora.

Method of Use

The following therapeutic procedure is suggested: One or two tablets are inserted by the patient each night and each morning; treatment is continued for four to eight weeks.

Intravaginal Applicator for Improved Treatment of Vaginitis

This smooth, unbreakable, plastic device is designed for simplified vaginal insertion of Floraquin tablets by the patient. It places tablets in the fornices and thus assures coating of the entire vaginal mucosa as the tablets disintegrate.

A Floraquin applicator is supplied with each box of 50 tablets. G. D. Searle & Co., Chicago 80, Illinois. Research in the Service of Medicine.

SEARLE

Michigan's Department of Health

Albert E. Heustis, M.D., Commissioner

TPCF TESTING

In all biologic tests, there is a possibility of error. Serologic tests for syphilis are no exception. It is well known that a reasonably significant percentage of positive reactors to the serologic test for syphilis (STS) do not have syphilis. These are the biologic false positive reactors.

The biologic false positive phenomenon becomes a matter of great practical concern to persons who wish to be married in Michigan, to expectant mothers, and to physicians who must make an accurate diagnosis and act accordingly. The Michigan premarital examination law prohibits persons who have a positive or doubtful serologic test for syphilis (STS) from getting married in the state unless they obtain approval of a special medical dispensation from the State Health Commissioner. The prenatal examination law requires all expectant mothers to have a serologic test for syphilis when they first visit their physician. A possible biologic false positive reaction in these cases is of considerable importance.

In an effort to assist in the administration of both the premarital and prenatal examination laws of Michigan and to aid the physician who has special diagnostic problems, the Michigan Department of Health through its Division of Laboratories is prepared to perform Treponema Pallidum Complement Fixation (TPCF) tests. This test has an antigen prepared from virulent *T. pallida* by removing the lipid fractions and then extracting the antigenic material. The resulting antigen is then used in a regular complement fixation test. It is probably the best and most practical answer at the present time to the problem of biologic false positives.

Performance of the TPCF tests by the Michigan Department of Health will be governed by the following priorities:

1. Those cases in which a special medical dispensation for marriage is requested on the basis of a probable biologic false positive reaction.
2. Problem blood tests taken in pregnancy in which the physician believes there is a biologic false positive reaction, or for which immediate treatment would need to be given if the patient were actually infected with syphilis.
3. Special problem cases submitted by physicians or health departments, after being screened by the Venereal Disease Control Officer.

The procedure for the handling of specimens and reports is as follows:

1. The Division of Laboratories will continue to prepare and distribute on request special containers for submitting blood specimens. These containers will include the United States Public Health Service Venereal Disease History Form (designed for TPI testing) which will be used for TPCF reporting until a new Michigan Department of Health form can be prepared for this purpose.

2. All history forms received by the Division of Laboratories will be reviewed by the Venereal Disease Control Officer and either approved or rejected for testing of the specimen.

3. Specimens rejected for TPCF testing will be disposed of as directed by the Venereal Disease Control Officer.

4. Those specimens approved for testing will be entered for STS and for TPCF testing and referred to the Serology Laboratory. The Laboratory will divide the specimens in two portions. One portion will be held under refrigeration for possible reference to the Venereal Disease Laboratory, Communicable Disease Center, USPHS. A standard STS test will be performed on the second portion. If this is negative and the recorded results of previous tests are doubtful, no further tests will be performed. If the test is positive, a TPCF test will be performed. The results of the TPCF test will be recorded as reactive, weakly reactive, non-reactive, anti-complementary, or unsatisfactory for testing. Tests will be performed several times weekly. The minimum number of specimens for testing will be ten.

5. The reports of the STS test and the TPCF test will be correlated and sent to the physician of origin, the Venereal Disease Control Officer, and the local full-time health officer.

DEPARTMENT POLICY ON X-RAY RADIATION

In connection with the possible existence of a hazard arising from the use of x-ray radiation, the Michigan Department of Health has established the following policy in the operation of its own 70 mm. chest x-ray photofluorographic equipment and recommends it for consideration by all other agencies or groups engaged in chest x-ray surveying. The following points are contained in the policy:

A. Protective Measures
   1. Proper coning of the x-ray tube;
   2. The equivalent of at least two and one-half millimeters of aluminum filtration;
   3. Exclusion of all persons except the examinee and the x-ray technician from the immediate vicinity of the x-ray equipment;
   4. Use of proper voltages for energizing x-ray equipment.

B. Selection of Survey Groups
   1. Because of the very low incidence of tuberculosis in the younger age groups, the minimum

(Continued on Page 619)

respiratory infections
gastrointestinal infections
genitourinary infections
miscellaneous infections

immediate therapeutic response

use

Sumycin

Squibb Crystalline Tetracycline Phosphate Complex

intramuscular

with Xylocaine*



250 mg. per 1 dose vial
100 mg. per 1 dose vial

- when oral therapy is contraindicated (vomiting, dysphagia, intestinal obstruction, gastrointestinal disorders)
- when the patient is comatose or in shock
- postoperatively

1. fast peak blood and tissue concentrations
2. high cerebrospinal levels
3. for practical purposes, Sumycin is sodium-free

Each vial contains tetracycline phosphate complex equivalent to 250 mg., or 100 mg., of tetracycline HCl. (Note: 250 mg. dose may produce more local discomfort than the 100 mg. dose.)

FLEXIBLE DOSAGE FORMS FOR CONTINUING ORAL THERAPY

	Tetracycline phosphate complex equiv. tetracycline HCl (mg.)	Packaging
Capsules (per capsule)	250	Bottles of 16 and 100
Half Strength Capsules (per capsule)	125	Bottles of 16 and 100
Suspension (per 5 cc. teaspoonful)	125	60 cc. bottles
Pediatric Drops (per cc.—20 drops)	100	10 cc. bottles with dropper

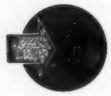
SQUIBB

Squibb Quality—the Priceless Ingredient

*SUMYCIN® IS A SQUIBB TRADEMARK. ®T.M.® ADIKA PHARMACEUTICAL PRODUCTS, INC.



PENETRATES*



SOFTENS FECES



ADDS FORMED BULK



EASES EVACUATION



*Unique encapsulation of millions of minute oil globules by Irish moss assures complete penetrant diffusion in stools.

IN CONSTIPATION

TO SOFTEN STOOLS WITHOUT TISSUE DEHYDRATION
AND MAKE THEM MOVE WITHOUT STRAINING

KONDREMUL®

COLLOIDAL EMULSION OF MINERAL OIL AND IRISH MOSS patch

PROVEN SAFE...EFFECTIVE • IN PREGNANCY • IN CHILDHOOD • IN MIDDLE-AGED PATIENTS • IN ELDERLY PATIENTS • **THROUGH MORE THAN 25 YEARS OF USE**

AVAILABLE in three pleasant-tasting formulas:

for the average patient
KONDREMUL (Plain)
containing 55% mineral oil. Bottles of 1 pint.

for more hypotonic cases
KONDREMUL WITH CASCARA
0.66 Gm. non-bitter Ext. Cascara per tablespoonful.
Bottles of 14 fl.oz.

for more resistant constipation
KONDREMUL WITH PHENOLPHTALEIN
0.13 Gm. (2.2 gr.) phenolphthalein per tablespoonful.
Bottles of 1 pint.

patch **THE E. L. PATCH COMPANY** Stoneham, Massachusetts

70 YEARS OF SERVICE TO THE MEDICAL PROFESSION

Say you saw it in the Journal of the Michigan State Medical Society

Legal Opinion

LIABILITY OF PHYSICIANS RE: BLOOD TRANSFUSIONS

Dear Mr. Burns:

I have given consideration to the questions posed by Dr. — — with respect to the liability of physicians and surgeons arising out of the medical or surgical treatment of patients whose religious beliefs contra-indicate transfusions of whole blood or blood substitutes. The inquiry suggests three types of situation in which problems arise as follows:

(1) The emergency situation in which a patient arrives at the hospital unconscious and unaccompanied by family or friends and emergency treatment, including transfusion, is indicated.

(2) The similar emergency situation in which a patient arrives at the hospital unconscious but is accompanied by family or friends of the same sect who reject the doctor's advice and refuse the treatment.

(3) The situation in which a conscious patient refuses recommended transfusions before surgery but does accept surgical treatment in the course of which he goes into shock and transfusion is thereby reindicated.

The foregoing situations are, by no means, all that might arise in this general area but are, perhaps, sufficient to illustrate the application of the general principles involved.

Basically, the patient has the right at all time to accept or reject recommended medical or surgical treatment and procedures. The right of a doctor to administer treatment rests upon the patient's consent. A patient may consent or refuse to consent to treatment or to specific procedures for any reason which appeals to him or for no reason. Whether his consent is withheld because of religious beliefs or otherwise is, therefore, of relatively little importance since it is forbidden to the doctor to administer any treatment to a competent patient who specifically rejects such treatment or fails to consent thereto either expressly or impliedly.

Applying this general principle to the situations submitted, I am of the opinion:

(1) That where an unconscious patient, unaccompanied by family or friends, is admitted under such emergency conditions as to require the doctor to use his best judgment as to the type of treatment to be administered, and that judgment indicates the necessity of blood transfusions, he may properly administer them. The rationale of this conclusion is that under such circumstances the patient's consent thereto will be implied since it cannot reasonably be presumed that, if conscious, any patient would refuse or reject proper treatment and it would be contrary to humanitarian principles to refuse proper treatment merely because the patient is not in condition to give express consent thereto. It must be kept in mind, however, that in such circumstances drastic, unusual or dangerous treatment is justified only by real emergency and that there must always be direct relationship between the degree of emergency and the kind and degree of treatment that is given under the theory of implied consent.

(2) Where, in a similar situation, the patient is accompanied by family or friends who know of his religious beliefs and communicate them to the doctor and, in behalf of the patient forbid such treatment, more perplexing problems arise. If the accompanying spokesman is a parent, spouse or legal representative, I believe, generally, the refusal to consent is that of



IN THE MANAGEMENT OF URINARY TRACT INFECTIONS YOU CAN BE SURE WITH ®

SUROMATE

patch

NEW TRIPLE SULFA WITH THE DOUBLE PLUS

EACH TABLET CONTAINS:

Sulfadiazine ..... 100 mg.
Sulfamerazine ..... 100 mg.
and
Sulfacetamide ..... 100 mg.

+ Ext. Hyoscyamus ..... 5.75 mg. (alkaloids 0.155%)
+ Potassium citrate ..... 200 mg.

SUPPLIED: Bottles of 100 tablets.

Superior, broad-spectrum antisepsis. Highly soluble, rapidly absorbed, maintains high g.u. concentrations. Effective in low dosage with minimal risk of crystalluria, sensitization, resistance or superinfection.

Prompt antispasmodic and anti-irritant relief of pain and urgency.

Diuresis and alkalization to enhance sulfonamide solubility and safety.

patch THE E. L. PATCH COMPANY
Stoneham, Massachusetts

70 YEARS OF SERVICE TO THE MEDICAL PROFESSION

for modern
control of
salt retention
edema

CUMERTILIN®
(Brand of Mercumatilin, Endo)
Tablets

- effective **oral** diuretic with no significant gastrointestinal irritation[1]
- Suitable for long-term maintenance therapy.
- eliminates need for injections in certain cases, lengthens interval between injections in others
- basically **different** in chemical structure, extending the therapeutic choice in organic mercurials

DOSAGE: 1 to 3 tablets daily as required.

SUPPLIED: As orange tablets, in bottles of 100 and 1000. Also available—

CUMERTILIN Sodium Injection, 1- and 2-cc ampuls, in boxes of 12, 25, and 100; and 10-cc. vials, individually and in boxes of 10 and 100

1 Pollock, B. E., and Pruitt, F. W.: Am. J. M Sc., 226:172, 1953

THE G. A. INGRAM COMPANY
4444 Woodward Avenue. Detroit 1. Mich.

the patient and should be so regarded by the doctor. If the spokesman is not parent, spouse or legal representative, his or her consent to or rejection of treatment is not necessarily the act of the patient and is not, in itself, binding on either the doctor or the patient. However, the information so conveyed to the doctor may well be regarded as sufficient to negate implied consent on the part of the patient and cannot, therefore, be safely disregarded. In short, where the doctor knows that the patient's religious beliefs are such that he would not consent to transfusions were he conscious and able to give or withhold such consent, it would seem to follow that his consent cannot be implied or presumed and, therefore, with the possible exception of the most dire emergency, such treatment should not be given.

As to whether, in such circumstances, even the most grave emergency would justify disregard of the patient's known beliefs is a question to which no positive answer can be given. I have been unable to find any definite precedent among the adjudicated cases and can suggest only that such a situation be regarded as presenting one of those problems, not infrequently encountered, in which the doctor must weigh and balance the possible consequences involved and assume or decline the risk as his conscience and best judgment dictates.

(3) Where a conscious adult patient refuses recommended transfusions before surgery but undergoes surgical treatment in the course of which transfusions are reindicated, difficult problems can arise. I am of the opinion, however, that such problems can be kept to a minimum if the doctor keeps in mind at all times the basic concept of consent. For example, where the doctor knows in advance of surgery that the patient has rejected transfusions and does not and will not consent thereto, it cannot reasonably be implied or presumed that he consents thereto while anesthetized during surgery. In such a case the doctor has undertaken to perform the surgery with the knowledge of the patient's refusal to consent to certain treatment or procedures. If there is a foreseeable possibility that a situation will arise during surgery in which a transfusion will be indicated, the patient can and should be advised in advance of that possibility. If, upon being so advised, he continues to refuse to accept such treatment or refuses to consent that the doctor may exercise his judgment as to procedures during surgery, and advises the doctor that under no circumstances will he willingly undergo transfusion, the doctor is limited to the choice of proceeding under such limitations or of declining to perform the surgery.

While I regret that I am unable to lay down a specific set of rules that will govern in all circumstances, I trust that the foregoing will be helpful as a general guide.

Very truly yours,

LESTER P. DODD,
Legal Counsel

January 16, 1958

RE: HOSPITAL AUDIT OF CHARTS

Dear Mr. Burns:

I have received and given consideration to the inquiry presented by .....M.D., Medical Director of.....Hospital, by his letter of December 16, 1957.

The question posed in that letter is phrased as follows:

> "The question has been raised by the Hospital Staff men as to whether or not it is necessary to secure the written permission of the patient before his case can be referred to the Audit Committee for review."

I am assuming that the Audit Committee referred to is a committee comprised of selected members of the

Hospital Staff under authority of the by-laws or regulations governing the Hospital.

The inquiry raises questions pertaining both to physicians and surgeons and to hospital authorities. Presumably, the question as to whether the patient's consent is necessary or advisable arises from doubt as to whether review and examination of the records pertaining to his case will, without his consent, (a) constitute an invasion of the patient's right to privacy, or, (b) constitute an improper disclosure of confidential or privileged matters on the part of his physician. Both rights are substantial and are rather jealously guarded by the law.

Generally, any disclosure of the patient's medical records not authorized by the patient, either expressly or by necessary implication, is violative of his rights. The difficult question is whether, in respect to a medical audit review, his consent may be implied. A plausible argument may be made that in accepting admission to the hospital and in consenting to operative or medical procedures, he has impliedly consented that they be carried out in accordance with the regulations and practices in effect in the hospital, including audit procedures. The principal weakness in this argument is that the patient is not commonly aware of the existence of such regulations and procedures and, consequently, cannot be presumed to have consented thereto.

Basically, of course, the review of the patient's records may be said to be in his interest and for his benefit since its primary purpose is to maintain high standards of care in the hospital. Since this is so, I think it unlikely that any substantial number of patient complaints are to be expected. I feel, nevertheless, that there may be at least technical violation of the patient's rights and that good practice would indicate the desirability of obtaining patient consent routinely. I think it would be undesirable to unduly emphasize audit procedures to the patient in obtaining his consent as to do so might convey to the patient incorrect ideas as to the use and purpose of such procedures. I feel, however, that to embody such consent in the form signed by the patient upon his admission to the hospital or in his consent to operative procedures, or both, is desirable. It seems to me that this could be done simply, routinely, and unobtrusively.

Very truly yours,

LESTER P. DODD,
Legal Counsel

February 24, 1958

MALIGNANT MELANOMA

(Continued from Page 566)

References

1. Allen, A. C., and Spitz, S.: Malignant melanoma: Clinicopathological analysis of criteria for diagnosis and prognosis. Cancer, 6:1-45, 1953.
2. Couperus, N., and Rucker, R. C.: Histopathological diagnosis of malignant melanoma. Arch. Dermat. u. Syph., 70:199-216, 1954.
3. Preston, F. W., Powers, R. C., Clarke, T. H., and Walsh, W. S.: Malignant melanoma: Treatment and end-results in two hundred and twenty-five cases. A.M.A. Arch. Surg., 69:385-392, 1954.
4. Pack, G. T., Gerber, D. M., and Scharnagel, I. M.: End-results in the treatment of malignant melanoma: A report of 1190 cases. Ann. Surg., 136: 905-911 (Dec.) 1952.
5. McCune, W. S.: Malignant melanoma: Forty cases treated by radical resection. Ann. Surg., 130: 318-332 (Sept.) 1949.

INFO-DEX

CANCER REGISTRY SYSTEM

Indispensable for hospitals who wish to comply with the requirements of the American College of Surgeons for a Cancer Registry.

INFO-DEX records in one file information that would require 5 separate files.

INFO-DEX is economical—So easy to keep, it requires no trained personnel.

INFO-DEX saves time and space.

INFO-DEX is helpful in research.

USED IN HUNDREDS OF HOSPITALS

INFO-DEX CANCER REGISTRY SYSTEM was devised in collaboration with the Statistical Department of the American Cancer Society and meets the requirements of the American College of Surgeons.

Additional information and samples sent on request with no obligation

MEDICAL CASE HISTORY BUREAU

Medical Case History Bureau
17 West 60th Street
New York 23, N. Y.

Dept. M-458

Gentlemen:

Kindly send samples of the Info-Dex Cancer Registry System.

Name of Hospital or .....

Doctor .....

Address .....

City .....

State ..... Zone .....

Letters to the Editor

Dear Doctor Haughey:

You were kind enough to publish a biographical article about me in March 1956 because I was President of the American Association for Thoracic Surgery, that year. When the article was published I wrote to you saying that I was afraid no one would understand why it had been written. Since then it has become obvious that most of the doctors who read the article thought that I had retired. I have been hearing from all parts of the state that I have retired. The result has been that those doctors have stopped sending me patients. This last year my income from practice was one third of what it was before the article was published.

I, therefore, am writing to you to ask that you insert some little notice to the effect that the article was written only because of the policy you then had, to publish items about men from Michigan who had been elected to the presidency of a national organization. It was indeed a nice gesture, but it has certainly backfired for me. If you can publish some short note about it, and that *I have not retired*, I shall greatly appreciate it.

Sincerely yours,

RICHARD H. MEADE

Grand Rapids, Michigan
March 5, 1958

Laboratory Examinations

Tissue Diagnosis

Allergy Tests	Hematology
Autopsies	Papanicolaou Stain
Bacteriology	Pregnancy Tests
Basal Metabolism	Protein Bound Iodine
Chemistry	Urinalysis
Electrocardiograms	

Serology—Kahn and Wassermann

CENTRAL LABORATORY

Oliver W. Lohr, M.D., *Director*
537 Millard Street
Saginaw, Michigan
PHONE: Pleasant 2-4100
2-4109

BUREAUCRACY AT WORK

Dear Doctor Haughey:

Salk and "Flu" vaccines have captured the headlines, but occasionally a prospective traveller to South America inquires about Yellow Fever immunization.

Having had such a request and being unable to obtain any vaccine locally, I seized the opportunity to investigate the matter of Yellow Fever immunization during a wait of several hours between trains while in Washington, D. C.

Would the U. S. Public Health Service be able to help me? I tried to look up the number in the ten pound Washington telephone book. There were no U. S. Government numbers listed anywhere in the yellow pages. Odd, I thought, but try the white pages. Sure enough, there were eight pages of U. S. Government numbers in the white pages, listed by departments.

Remembering from some distant experience that the Public Health Service is a part of the Department of Health, Education and Welfare, I tried H. U. S. Government, and found the Public Health Service between Kandall School, Primary Department and Biologics Preparation Laboratory. The number is EX-cutive 3-6300.

On calling this number and stating my business, I was informed by a pleasant female voice that Miss Barnes, JU-niper 6074 would give me the information I wished.

So, hanging up, and dropping another dime, I called JU-niper 6074. After what seemed like several minutes of ringing another very pleasant female voice answered and said "the number you have called has been discontinued. Please consult information to obtain the correct number. Thank you. This is a mechanically recorded voice speaking." Obviously good only for a one-way conversation, I thought.

Calling EX-cutive 6300 again, for another dime, the first pleasant voice again answered. I told her about JU-niper 6074 being discontinued. As if it happened every day, she advised me to hold on and she would locate Miss Barnes. If this was another machine talking to me, I couldn't be sure.

About fifteen minutes and forty-five cents worth later, the same pleasant voice announced, somewhat mechanically, I thought, that Miss Barnes had been located and she would put her on my wire. It sounded a little too human for a record player, I thought.

Miss Barnes wanted to be very helpful. She began her conversation as if she knew exactly what she wanted to say and exactly where she wanted to stop, as if she were reading it all from an open book. Yellow Fever immunization could be obtained on Tuesdays and Fridays at 2:45 p.m. at the Public Health Service Out-Patient Clinic, 4th and C streets S.W., Washington, D. C.

For residents of Michigan, she continued, Yellow Fever immunization is available at the Public Health Service Center at Windmill Point, Detroit, at 10 a.m. on Wednesday only, except when Wednesday is a national holiday, in which case it would become available at 10 a.m. on the following Wednesday. Yellow Fever immunization would also be available at Henry Ford Hospital, Detroit, at any time by appointment, and at the Perkins Clinical Laboratory, 970 Fisher Building, Detroit, Mondays, Tuesdays, Thursdays and Fridays from 9 a.m. to 5 p.m. and also on Saturday morning from 9 a.m. until noon. She added, somewhat snootily, that there would be a charge at the two latter places. I commented that the six-day week service might be worth it, especially since Windmill Point is out where

Say you saw it in the Journal of the Michigan State Medical Society

the Detroit River leaves Lake St. Clair, a considerable distance from downtown Detroit, in terms of either miles, times or car fare. She didn't seem to hear me. Another record, I thought.

A question requiring an answer would resolve this doubt. I inquired as to the possibility of a physician in private practice obtaining a supply of vaccine for immunization of travellers to infected areas. Again, as if she had answered the same query a thousand times she replied, by agreement with the World Health Organization, only institutions may become Yellow Fever Immunization Centers, and the vaccine is not distributed except to a designated center. Institutions wishing to qualify as Yellow Fever Immunization Centers may file an application with the U. S. Public Health Service, Division of Foreign Quarantine, Washington 25, D. C. It is not possible to designate a private physician as an Immunization Center, she repeated, but added, somewhat archly, I thought, for a recorded voice, if it was one, that any physician may buy the vaccine from a drug store and immunize anyone he chooses, but, if he did so he could not issue a valid certificate of immunization because he has not been approved as an Immunization Center by the World Health Organization.

I knew then it was the voice of bureaucracy speaking, and not a record.

LOUIS LEFEVRE, M.D.

Muskegon, Michigan

Dear Doctor Haughey:

The February number of the JOURNAL OF THE MICHIGAN STATE MEDICAL SOCIETY has just arrived and, as usual, I am admiring it and enjoying it. I am very flattered that I have been honored by being mentioned not only once but on two occasions.

On Page 282 there is a typographical error that I would like to have corrected. The statement is made that "The International College of Surgery announced recently in Paris the election of Frederick A. Coller, M.D., as an honorary member of the society, et cetera."

This honor was conferred upon me by the International Society of Surgery which is a very old society, the membership of which is comprised of selected members from about 60 countries. If it is possible for you to make this correction in one of your following issues, I would appreciate it very much.

With all good wishes, I am,

Sincerely yours,

FREDERICK A. COLLER, M.D.

Ann Arbor, Michigan
February 27, 1958

DEPARTMENT POLICY ON X-RAY RADIATION

(Continued from Page 612)

age of examinees who will be accepted is established at eighteen years. Children under this age will be accepted if referred by the family physician on his prescription form;

2. Chest x-ray surveys are to be carried out in those population areas where morbidity and mortality figures, and the results of tuberculin testing programs, indicate a relatively high prevalence of tuberculosis.



KLING*

Conform Bandage
the amazing all-cotton bandage that:

Clings to itself — prevents slipping
Stretches — for controlled pressure
Conforms — to any body contour

*TRADEMARK



BAND-AID
TRADEMARK

Butterfly Closure

- Center section does not stick to wound
- Super-Stick adhesive holds wound edges together
- Sterile — Waterproof

Products of

Johnson & Johnson

THE G. A. INGRAM COMPANY
4444 Woodward Ave.
Detroit 1, Mich.
Te. 1-6880

In Memoriam

JOHN R. RALYEA, M.D., forty-one, Detroit physician, died January 29, 1958, of a stroke in Finland. Doctor Ralyea was chief anesthesiologist at Highland Park General Hospital.

Doctor Ralyea was attending Turkin University, Finland, on a six-month Fulbright lectureship in anesthesiology.

Doctor Ralyea graduated from Eastern Michigan College and later from Wayne State University Medical School. He also was a graduate of the University of Chicago Clinic where he spent a year in residence followed by eight years in general practice in Paw Paw, Michigan.

A native of Buffalo, New York, Dr. Ralyea had been on the staff of Highland Park General Hospital since 1955 and had been appointed chief anesthesiologist in 1956.

With him in Finland were his wife, Imbi, an anesthetist, and their twelve-year-old son.

HENRY T. SETHNEY, M.D., seventy-five, Menominee physician and surgeon, died in his sleep January 18, 1958. After nearly fifty years of practice as a physician and surgeon, he retired in 1955.

A native of Norway, Michigan, on the Menominee Iron Range, Dr. Sethney was born in 1882, and graduated from Normandy High School. He attended the University of Michigan and transferred to the University of Illinois where he received his degree in medicine in 1905.

He interrupted his practice in 1917 to offer his professional services to the U. S. Army Medical Corps and was commissioned a lieutenant. At the end of the war he left the service with the rank of major. He was with the unit through two of the major battles of the War in France, the Meuse-Argonne and St. Mihiel, and in three major battles in Belgium.

Doctor Sethney donated his services for a quarter of a century to Menominee High School football teams. His old slouch hat and his medical case were as much a part of every Maroon football game as the field and fans.

He was a past president and held about every office in the Menominee County Medical Society. He was first president of the staff at St. Joseph-Lloyd Hospital. He was the first commander of the Menominee American Legion Post and served four terms as a member of the Menominee Board of Education; was president of the board in 1930 and again in 1933.

TAKE A LOOK AT
NEW DIMETANE®
THE UNEXCELLED
ANTIHISTAMINE

HARRY L. STERN, M.D., fifty-nine, Detroit industrial physician, died January 25, 1958 in Henry Ford Hospital. He had served as industrial physician for the Ford Motor Company for sixteen years.

A native of Kansas City, Missouri, he held degrees from the University of Michigan and the Detroit College of Medicine and Surgery. Doctor Stern was a staff member of Grace Hospital, member of Wayne County Medical Society, the Michigan Industrial Medical Association and the American Academy of General Practice.

CLAYTON T. WILLISON, M.D., eighty-seven, Sault Ste. Marie physician and surgeon since 1896, died January 30, 1958.

Doctor Willison was honored as "Michigan's Foremost Family Physician" in 1951.

He started his Upper Peninsula medical practice in 1896 as a lumber camp physician and moved to Sault Ste. Marie a few years later.

Dr. Willison was born in Hickory Corners, Michigan, on June 14, 1870. He attended the University of Michigan Medical School and Chicago Homeopathic Medical School from which he graduated in 1891.

He was a charter member of the Fifty-Year Club of the Michigan State Medical Society, the American Medical Association and Chippewa County Medical Society. He was a life member of the IOOF, and a life member of the Knights of Pythias, and Bethel Lodge. He was an honorary member of the Rotary Club.

A CANCER REGISTRY PROGRAM

(Continued from Page 594)

would be threatened with these dangers, it is best to develop a series of local or county registries to provide the necessary services within the accessible range of the participating hospitals and to send to the state-wide registry only a minimum of basic materials for the compilation of state-wide cancer morbidity rates.

References

1. Statistics developed by Dr. Aubrey Sneider, Statistician, American Cancer Society.
2. Nelson, Harry M., and Jennings, E. R.: Cancer Registries. J. Michigan S. M. Soc., 56:449-450 and 470 (April) 1957.

Dimetane®
(PARABROMDYLAMINE MALEATE)
TABLETS (4 MG.), ELIXIR (2 MG. PER 5 CC.) AND EXTENTABS® (12 MG.) UNEXCELLED POTENCY, UNSURPASSED THERAPEUTIC INDEX AND RELATIVE SAFETY. MINIMUM DROWSINESS AND OTHER SIDE EFFECTS. A. H. ROBINS CO., INC., RICHMOND, VIRGINIA. ETHICAL PHARMACEUTICALS OF MERIT SINCE 1878 | Robins



. . . . . NEWS MEDICAL

MICHIGAN AUTHORS

Warren R. Moore, M.D., Detroit, is the author of an article entitled "Inguinal Endometriosis in Bilateral Hernia Sacs Associated with Extensive Pelvic Endometriosis," published in *Harper Hospital Bulletin*, November-December, 1957.

Nathan Levitt, M.D., John Simpson, M.D. and **Reuben Lopatin, M.D.**, Detroit, are the authors of an article entitled "Electrophoretic Studies of Pleural Effusions," published in *Harper Hospital Bulletin*, November-December, 1957.

Harold Henderson, M.D. and **Harold C. Mack, M.D.**, Detroit, are the authors of an article entitled "Program Highlights—1957 Meeting, American Association of Obstetricians and Gynecologists," published in *Harper Hospital Bulletin*, November-December, 1957.

Raymond Lafontaine, M.D., Detroit, is the author of an article entitled "Neurological Examination of the Newborn and Older Infant." published in the *Henry Ford Hospital Medical Bulletin*, September, 1957.

Grover C. Penberthy, M.D., Detroit, is the author of an article entitled "The Reflection of a Surgeon in the Progress of His Art," published in the *Henry Ford Hospital Medical Bulletin*, September, 1957.

W. J. Treanor, M.D., and **C. E. Rupe, M.D.**, Detroit, are the authors of an article entitled "Porphyria—An 'Enzyme Lesion' Review of Basic and Clinical Aspects," published in the *Henry Ford Hospital Medical Bulletin*, September, 1957.

Robert E. Birk, M.D., and **Edward L. Quinn, M.D.**, Detroit, are the authors of an article entitled "Anaphylactoid Reaction to Oral Penicillin G; Case Report," published in the *Henry Ford Hospital Medical Bulletin*, September, 1957.

William J. Fulton, M.D., Detroit, is the author of an article, the second in a series of four, entitled "Medical Department Layout and Design," published in *Industrial Medicine and Surgery*, February, 1958.

J. P. Gray, M.D., Detroit, is the author of an article entitled "The Medical Writer's Part in Keeping the Practicing Physician in Step with Modern Scientific Advances," presented at the 14th Annual Meeting, American Medical Writer's Association, St. Louis, September, 1957, and published in the *Mississippi Valley Medical Journal*, January, 1958.

Charles W. Sellers, M.D., Detroit, is the author of an article entitled "The Fallacy of Retirement," selected for presentation in the contest on non-medical writing conducted in connection with the 14th Annual Medical Writer's Association Meeting, St. Louis, September, 1958, and published in the *Mississippi Valley Medical Journal*, January, 1958.

J. P. Gray, M.D., Detroit, is the author of an article entitled "Report of Visiting Lecturer on Medical Writing, American Medical Writers' Association, during 1956-1957," presented at the 14th Annual Meeting, American Medical Writers' Association, St. Louis, September, 1957, and published in the *Mississippi Valley Medical Journal*, January, 1958.

George Moriarty, M.D., Aaron Farbman, M.D., Irving Kurtz, M.D., Warren Babcock, M.D., Juan Chiappe, M.D., and **Laurence Linkner, M.D.**, Detroit, are the authors of an article entitled "Gems and Stratagems I. 1957 Meeting, American College of Surgeons," published in *Harper Hospital Bulletin*, November-December, 1957.

Hermann Pinkus, M.D., Monroe, is the author of an article entitled "Anatomy of the Skin, 1955," published in *Dermatologica*, Vol. 114, No. 1 (1957).

Renato J. Staricco, M.D., and **Hermann Pinkus, M.D.**, Monroe, are the authors of an article entitled "Quantitative and Qualitative Data on the Pigment Cells of Adult Human Epidermis," presented at the Seventeenth Annual Meeting of The Society for Investigative Dermatology, Inc., Chicago, Illinois, June 9, 1956, and published in the *Journal of Investigative Dermatology*, January, 1957.

Murray G. Williams, M.D., and **Hermann Pinkus, M.D.**, Monroe, are the authors of an article entitled "Preliminary and Short Report Sulphates in Human Sweat," published in the *Journal of Investigative Dermatology*, April, 1957.

Hermann Pinkus, M.D., Monroe, with the co-operation of **Warren L. Macaulay, M.D., Herbert Z. Lund, M.D., James R. Delaney, M.D., Harold E. Anderson, M.D.**, and **Joseph M. Hitch, M.D.**, is the author of an article entitled "Alopecia Mucinosa," read before the 77th Annual Meeting of the American Dermatological Association, Inc., Belleair, Florida, April 13, 1957, and published in the AMA *Archives of Dermatology*, October, 1957.

Hermann Pinkus, M.D., Monroe, is the author of an article entitled "The Problem of Multicentricity in Skin Cancer," published in the *Bulletin of Wayne State University College of Medicine and Detroit Receiving Hospital*, July, 1957.

Peter J. Kropp, M.D., Detroit, is the author of an article entitled "Examination of the Epidermis by the Strip Method," published in the *Journal of Investigative Dermatology*, September, 1957.

Ernest H. Watson, M.D., Ann Arbor, is the author of an article entitled "The Physician and the Adoption of Children," published in the *Henry Ford Hospital Medical Bulletin*, December, 1957.

E. O. Jodar, M.D., Detroit, is the author of an article entitled "Neonatal Chicken Pox," published in the *Henry Ford Hospital Medical Bulletin*, December, 1957.

Harold F. Falls, M.D., Ann Arbor, is the author of an article entitled "First Annual Report of the National Medical Foundation for Eye Care to the Medical Profession," text of an address to an open meeting of members and friends of the National Medical Foundation for Eye Care, Palmer House, Chicago, October 15, 1957, and published in *Eye Digest*, January, 1958.

Lee Carrick, M.D., Detroit, is the author of an article entitled "Cutaneous Cryptococcosis," published in AMA *Archives of Dermatology*, December, 1957.

Earl G. M. Krieg, M.D., Detroit, is the author of an article entitled "Regional Enteritis Response to Treatment with Crude Liver Extract," published in the *American Journal of Gastroenterology*, October, 1957.

William D. Robinson, M.D., Ann Arbor, **John W. Sigler, M.D.**, Detroit, and **Emmerich von Haam, M.D.**, Ohio State University, are the authors of an article entitled "A Clinicopathological Conference Edited under the Auspices of the Ohio Society of Pathologists," William Sinclair, M.D., President, and published in the *Ohio State Medical Journal*, February, 1958.

Frank H. Bethell, M.D., Ann Arbor, is the author of an article entitled "Chemotherapy of the Leukemias and Lymphomas," presented at the Annual Session of the Arkansas Medical Society, April, 1957, and published in the *Journal of the Arkansas Medical Society*, January, 1958.

Thad H. Joos, M.D., Grosse Pointe Woods, is the author of an article entitled "The Home Management of the Poliomyelitis Respirator Patient," published in the *Henry Ford Hospital Medical Bulletin*, December, 1957.

E. E. Schumacher, Jr., M.D., Grand Rapids, is the author of an article entitled "Cor Pulmonale in Association with Raynaud's Disease: Report of a Case with Sympathectomy," published in the *Henry Ford Hospital Medical Bulletin*, December, 1957.

G. L. Waldbott, M.D., Detroit, is the author of an article entitled "Urinary Fluoride and Calcium Excretion in Persons Suspected of Fluoride Intolerance," published in the *Henry Ford Hospital Medical Bulletin*, December, 1957.

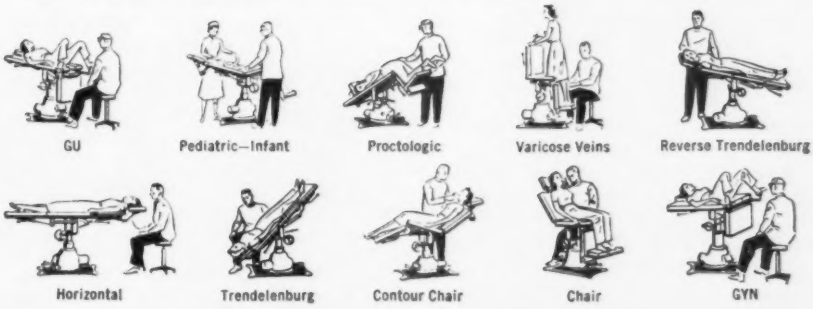
Edwin M. Knights, Jr., M.D., and **Joseph C. Erwin, M.D.**, Detroit, are the authors of an article entitled "One-Drop Test for Urine Protein Determination," published in the *Henry Ford Hospital Medical Bulletin*, December, 1957.

A. Robert Bauer, M.D., and **Philip J. Howard, M.D.**, Detroit, are the authors of an article entitled "Respiration in the Newborn Infant," published in the *Henry Ford Hospital Medical Bulletin*, December, 1957.

Charles Sellers, M.D., Detroit, is the author of an editorial entitled "Patient Relationships," published in *Detroit Medical News*, June, 1957 and reprinted in *Current Medical Digest*, January, 1958.

J. J. Van Gasse, M.D., M.P.H., Jackson, is the author of an article entitled "Counseling and Ataraxia:

RITTER EXAMINING TABLES enable the physician to treat more patients, more thoroughly with less effort in less time.



12 Basic Positions provide amazingly easy accessibility to your patients. These energy-saving features are made possible by the Ritter exclusive motor-hydraulic base, an 18-inch elevation range, effortless handwheel tilt, 180 degree table rotation, and easy adjustment of headrest, footrest, back, seat, and leg sections.

We will be happy to arrange a demonstration of the Ritter Universal Table at your convenience.

NOBLE-BLACKMER, Inc.

267 W. Michigan Ave., Jackson, Michigan

An Effective Combination in the Management of Alcoholics," published in *Clinical Medicine*, February, 1958.

S. J. Bardwell, M.D., is the author of an article entitled "Dystrophia Myotonica," published in THE JOURNAL of the Michigan State Medical Society and condensed in *Clinical Medicine*, February, 1958.

James A. Maher, M.D., formerly of Ann Arbor and now of Goldsboro, North Carolina, is the author of an article entitled "A Statistical Study of Lymphoblastoma in the Necropsy Series at the University of Michigan Hospital," published in the *University of Michigan Bulletin*, January, 1958.

Theodor Bonstedt, M.D., Ann Arbor, is the author of an article entitled "Residential Treatment Centers for Emotionally Disturbed Children," published in the *University of Michigan Medical Bulletin*, January, 1958.

Jack Lapides, M.D., and **J. M. Bobbitt, M.D.**, of Ann Arbor, are the authors of an article entitled "Preoperative Estimation of Renal Function." published in *The Journal of the American Medical Association*, February 22, 1958.

* * *

The search for new anti-polio drugs will go ahead at the University of Michigan school of public health under the grant of $136,155.00, supported by the March of Dimes. The grant, which became effective in January will be under the direction of Thomas Francis, Jr., M.D., professor of epidemiology. Associated with Doctor Francis in this work are Drs. Gordon C. Brown, Wilbur Ackermann, Kenneth E. Cochran and Donald E. Craig.

Commenting on the project, Doctor Francis explained that the investigations will have three broad purposes: (1) to discover a non-toxic chemical effective in the prevention or treatment of polio, (2) to uncover the mechanisms of interaction between virus and cells, and (3) to describe the epidemiological factors which govern the occurrence.

* * *

Applications for federal funds totaling more than $1,500,000 to provide additional medical research facilities at the University of Michigan Medical Center were authorized by the Regents, in January.

Largest amount being requested is $1,000,000 for construction costs on the research portion of the proposed Children's Hospital—Pediatrics Unit.

Another application will be made for $575,000 in U. S. Public Health matching funds for research facilities in the proposed second unit of the Medical Science Building.

* * *

The Veterans Administration announces it has several vacancies for Medical Rating Specialists at an annual salary of $8,645.

For additional information, interested persons may visit their nearest VA Regional Office or Hospital, or write to Personnel Officer, Veterans Administration Regional Office, 49 Fourth Street, San Francisco 3, California.

Gifts and grants totaling $118,834 were accepted by Wayne State University's Board of Governors at their recent (Feb. 19) monthly meeting.

The largest single grant of $37,043 went to the College of Medicine from the U. S. Public Health Service for continuing a cancer-teaching program and research.

Parke, Davis and Co. gave $11,000 to continue bile studies and The Children's Hospital of Michigan gave $3,000 to support a program in anesthesiology, both at the College of Medicine. Student Aids received a total of $7,299. The largest single grant was $3,000 from the Research Staff, General Motors Corp.

* * *

Latest consumer price index of the Labor Department reveals Minneapolis to be highest priced city in matter of consumer costs for medical care. For food, clothing, transportation and all other essential items combined, cost of living is higher in Boston, Chicago, Detroit, Portland and Los Angeles. But for medical care alone, Minneapolis' index of 171.6 is the nation's highest; at least it was at the end of January. This compares with national average of 141.7, which represents a 0.6 per cent rise over the previous month. The increase, said the Labor Department, "resulted from scattered reports of advances in fees for professional services and hospital rates. Group hospitalization insurance premiums also rose in a few cities."—WRMS, March 3, 1958.

* * *

An emergency paging device similar to Dick Tracy's two-way wrist radio is being used at the University of Michigan Medical Center for assembling emergency and security personnel from anywhere in the hospital.

The paging system consists of small compact shirt pocket receiving sets which key personnel carry at all times. When needed, the hospital switchboard operator can signal from one to four persons at once. On the receiving end, the pocket set emits a pleasantly pitched high tone similar to the "beep" noise on a telephone recording machine, but steady. As soon as the receiver hears the tone, he goes to the nearest telephone, calls the operator, and receives the message.

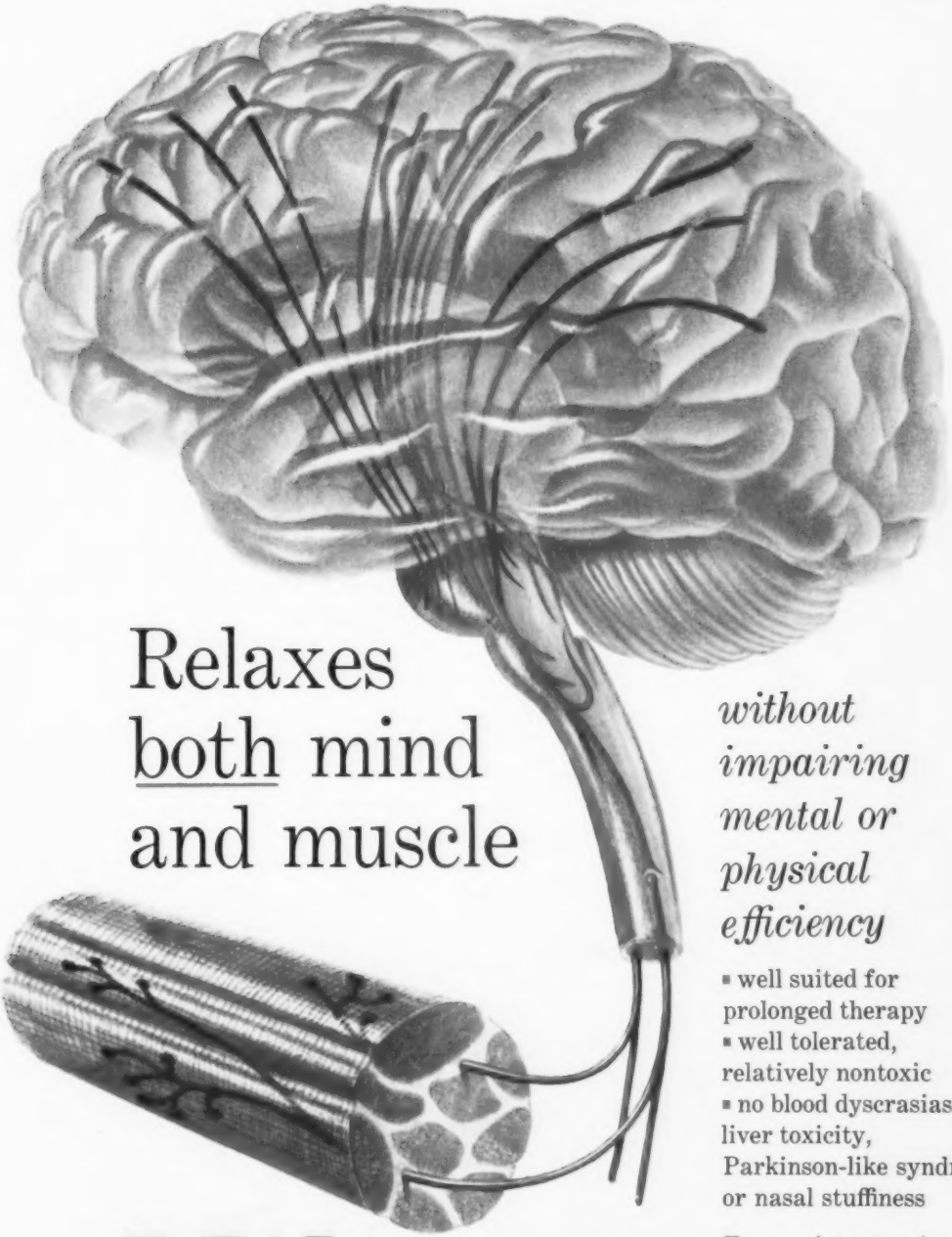
The major advantage of the system, according to Dr. A. C. Kerlikowske, hospital director, is that it makes possible a highly mobile emergency or security force of the limited staff on duty at the hospital at night.

Twenty of the small electronic sets are in use at the present time. The hospital administration hopes to obtain more in the near future, and, if feasible, eventually adopt this as a new call system to replace the hospital's present system. As many as 500 can be used in the same area, having a range of more than a mile.

* * *

The University of Michigan and Ypsilanti State Hospital formally dedicated laboratories which will be used in a $1,000,000 joint research project in schizophrenia and psychopharmacology, February 18, at the State Hospital, outside of Ypsilanti.

The five-year project is the largest such joint research venture ever to be undertaken by a university and a state mental hospital. Ralph W. Gerard, M.D., profes-



Relaxes both mind and muscle

without impairing mental or physical efficiency

- well suited for prolonged therapy
- well tolerated, relatively nontoxic
- no blood dyscrasias, liver toxicity, Parkinson-like syndrome or nasal stuffiness

For anxiety, tension and muscle spasm in everyday practice.

Miltown®

2-methyl-2-**n**-propyl-1,3-propanediol dicarbamate

TRANQUILIZER WITH MUSCLE-RELAXANT ACTION



THE ORIGINAL MEPROBAMATE
DISCOVERED & INTRODUCED BY
WALLACE LABORATORIES
NEW BRUNSWICK, NEW JERSEY

Supplied:
400 mg. scored tablets,
200 mg. sugar-coated tablets.
Usual dosage:
One or two
400 mg. tablets t.i.d.

CM-6590

AN IMPORTANT ADVANCE IN MENOPAUSAL THERAPY

Because it replaces *half* control with *full* control.

Because it treats the *whole* menopausal syndrome.

Because *one* prescription manages *both* the psychic and somatic symptoms.

SUPPLIED: Bottles of 60 tablets.
Each tablet contains:

MILTOWN® (meprobamate, Wallace) ..... **400 mg.**
2-methyl-2-*n*-propyl-1,3-propanediol dicarbamate.

Conjugated Estrogens (equine) ..... **0.4 mg.**

DOSAGE: One tablet t.i.d. in 21-day courses with one week rest periods. Should be adjusted to individual requirements.

Samples and literature on request.

Two-dimensional treatment of the menopause

Milprem*

MILTOWN®
A Proven Tranquilizer + CONJUGATED ESTROGENS (EQUINE)
A Proven Estrogen

WALLACE LABORATORIES, *New Brunswick, N. J.*
who discovered and introduced Miltown, the original meprobamate.

*TRADE-MARK



sor of neurophysiology and member of the University's Mental Health Research Institute, will direct the research from the University side. Kenneth Moore, M.D., of the State Hospital staff, will be in charge of that phase.

Financing for the project comes from the Psychopharmacology Service Center of the National Institute of Mental Health of the U. S. Public Health Service. The largest single grant ever made by that Institute, more than $850,000, is part of that financing.

Speakers at the dedication ceremony included: Jonathan Cole, M.D., director of the Psychopharmacology Service Center of the National Institute of Mental Health; Ralph W. Gerard, M.D., and Director Charles F. Wagg and Deputy Director V. A. Stehman, M.D., of the Michigan Department of Mental Health.

* * *

Year-round classes considered adoption by Wayne State University of a "Trimester" calendar of three equal fifeen-week terms on a year-round basis has been recommended by a special "University Committee on the Calendar."

According to the Committee, the plan is designed "to seek to operate the University at full capacity by utilizing more fully the faculty and space." Under the trimester system, as little as thirty-two months would be required to qualify for a degree instead of the usual forty-eight months.

The committee will submit its recommendations to the University Council. If approved, the plan would be submitted to the Council of Deans and then to the Presideat. Final approval would be made by the University's Board of Governors.

As proposed, the fall term would begin as soon as possible after Labor Day and continue three weeks into December. The winter term would begin soon after January 1 and would continue to mid-April. The spring term would begin in May and last until mid-August.

By adding the third semester instead of the traditional summer term, the Committee proposes year-round employment of the faculty. At present, most faculty members teach only ten months. Also proposed is a minimum increase of 20 per cent in faculty salaries and a provision to give them relief one semester in four from teaching duties.

Under the proposed program Wayne State could increase its enrollment by at least 20 per cent without additional staff or facilities, according to the Committee.

The Committee also proposed a short summer term to run during the spring semester to fill the needs of the many in-service teachers taking courses in the College of Education. It is expected that September, 1959, would be the earliest date the change-over could be initiated.

* * *

Physicians and Surgeons Book Company is in the market to purchase medical books for cash and will pay the transportation charges. If you have any usable medical books that you would like to dispose of, just send in the list of books giving the author and title and date of publication. The Book Company will promptly respond with the best offer for any books that can be used.

Important Announcement of Arteriosclerosis Treatment

GEROT PHARMACEUTIKA, owners of United States Letters Patent #2-776-973 issued January 1957 to Gerhard Gergely of Vienna, Austria, have licensed MEYER AND COMPANY of Detroit, Michigan, to synthesize and market 3, 7-dimethyl-xanthine double salt in the United States of America.

3, 7-dimethyl-xanthine double salt of oleic acid and magnesium, a stable compound marketed in Austria since 1950 under the name "Perskleran" and used in the treatment of ARTERIOSCLEROSIS is being marketed by MEYER AND COMPANY under the trade name of "Athemol."

The product is now available in tablet form.

Literature and clinical samples are available on request.

MEYER AND COMPANY

Pharmaceutical Manufacturers

16361 Mack Ave.

Detroit 24, Michigan

A. W. HEINE, M.D., HONORED

A. W. Heine, M.D., has been honored by the American Legion, Post Number 4, Mt. Clemens, Michigan. Such recognition by lay bodies has always indicated good public relations on the part of the practicing physician and brings prestige to the medical profession.



Dr. Heine graduated from the University of Michigan Medical School in 1917 and has practiced in Detroit and Mt. Clemens since. He is sixty-four years old and still is in active practice. He is a member of the Macomb County Medical Society, the Michigan State Medical Society, and the American Medical Association. The above photograph taken by the *Monitor Leader*, Mt. Clemens, shows Dr. Heine receiving the award presented by the American Legion representative.

* * *

The Health of the Nation . . . "We who deal with the health and medical welfare of our citizens are confronted with great opportunities and grave responsibilities. They challenge the best we can give in planning, in work and in service," said Julian P. Price, M.D., before the American Hospital Association's annual convention last October.

In a new pamphlet, Dr. Price—a member of AMA's Board of Trustees—has analyzed the factors that contribute to our present-day strengths and weaknesses in medicine and medical service and also has predicted the future role of medicine in bringing better care to the American people. His remarks are based not only on his own thinking but also on the suggestions of fifty-six top-notch medical authorities in all parts of the country. This is a message equally significant to physicians and the public. It is a scholarly, realistic appraisal of American medicine today—the progress made and the goals yet to be achieved. We hope that you will find this outstanding speech of value in your community—both for distribution to the public and as background material for articles and speeches. Copies may be secured from the Public Relations Department.

* * *

Guarding against malpractice claims.—Ways in which the practicing physician may guard against malpractice claims are set forth by Lt. Colonel Raymond Coward, Judge Advocate General's Corps, in his article, "Malpractice and the Service Doctor," in the February issue of the *Armed Forces Medical Journal*.

Colonel Coward, Chief of the Legal Office in the Army Surgeon General's Office, Washington, D. C., writes that the service doctor is less likely to be sued in his individual capacity than a doctor in private practice. This is due to the protection given service doctors by the Federal Tort Claims Act and other Federal laws and regulations.

The Colonel gives a ten point guide which will enable the physician, in the Armed Forces or in private practice, to avoid or at least reduce the number of medical professional liability claims.

These points include: (1) avoid careless remarks about the medical treatment the patient may have previously received from another doctor; (2) keep thorough, accurate, complete medical records; (3) make thorough examinations of the patient; and (4) do not experiment with unproven medicines.

* * *

Hawaii Medical Summer Conference.—The recent announcement and invitation to Mainland doctors by the Hawaii Medical Association to attend the Hawaii Summer Medical Conference in Honolulu July 1-3, 1958, has caused a great deal of interest.

The Conference is under the auspices of the Hawaii Medical Association, constituent society of the AMA, and Dr. Samuel L. Yee, President of the Hawaii Medical Association, has extended an open invitation to members of the medical profession to attend the Conference.

Included in the program are breakfast panels and a special afternoon clinic at a local hospital. Such outstanding speakers as Dr. Frederick C. Robbins of Cleveland, Dr. Ernest Jawetz of San Francisco and others of equal stature, will present papers of particular note.

The Conference has been timed to immediately follow the AMA Annual Meeting in San Francisco June 23-27, 1958. Official travel arrangements to Hawaii to attend the Conference are under the direction of Lee Kirkland Travel of Chicago and Kansas City (operators of Medical Tours). Aside from attendance at the scientific sessions, various other official social functions will be provided in the official trips, and a choice may be made of traveling round-trip by air or combining air and steamer travel between the Mainland and Honolulu.

For additional information, Conference Registration Forms, or to place reservations, contact Lee Kirkland Travel, c/o Medical Tours, P.O. Box 3433, Chicago 54, Illinois.

* * *

A new $450,000 appropriation raises to $2,700,000 the amount the Tobacco Industry Research Committee has made available for scientific research on tobacco and health since 1954. This money is made available to the Scientific Advisory Board to make grants-in-aid to independent scientists studying the problems of cancer and heart disease and the questions that have been raised concerning smoking in connection with health. The Scientific Advisory Board is comprised of nine doctors, scientists and educators, the chairman being Dr. Clar-

ence Cook Little, cancer research scientist. Dr. Little's 1957 report reviewed the status of research and reported that evidence does not uphold generalized charges made against smoking.

* * *

M. K. Newman, M.D., Detroit, addressed the Rehabilitation Section of the John Sealy Hospital of the University of Texas Medical Center, Galveston on February 4 and February 5, 1958. Topics discussed were "The Causes and Management of Backache Other than Disc Disease" and "Diagnosis and Management of Myogenic Diseases." Dr. Newman was elected to Fellowship of the Law-Science Academy of America at its annual meeting at the University of Texas, Galveston, February 5, 1958.

* * *

A Joint Action Program aimed at preventing accidents and improving care of accident victims was announced here by the American College of Surgeons, the National Safety Council, and the American Association for the Surgery of Trauma.

The announcement was made by I. S. Radvin, M.D., of Philadelphia, Chairman of the Board of Regents of the American College of Surgeons. The program will include six items:

(1) Public education in accident prevention and handling of the injured.

(2) Employment of joint state and local committees of the American College of Surgeons and National Safety Councils, together with other interested surgeons, safety engineers, and public officials to formulate safety plans for local committees.

(3) Possible registration of unusual cases of injury.

(4) Proposed investigations of emergency care of traffic injuries.

(5) Model legislation to require adequate training in first aid and transportation of the injured for ambulance attendants, policemen and fireman.

(6) Co-operation in the production and improvement of training materials and instructional aids dealing with problems in handling the injured.

Resources of the three organizations will be used in the effort to advise and assist civic groups to obtain passage of local ordinances requiring adequate training in handling of the injured by ambulance attendants, policemen and fireman. Under a proposed model ordinance, ambulance attendants are required to have completed standard and advanced first aid training and additional training as recommended by local health departments, to carry cards indicating their qualifications and to be re-examined and certified annually for their fitness to serve. The following cities now have such ordinances: San Francisco, Minneapolis, Syracuse, Cincinnati, Philadelphia, Flint, Kansas City, Missouri, and Butte, Montana.

* * *

Today's Health, the journal published by the American Medical Association for distribution to the public



"Multi-Service" X-Ray Unit. 300, 200, 100 Ma.



Mobile "Multi-Service" X-Ray Unit. 300, 200, 100 Ma.



"Spacesaver" Fluoroscope

HOW IMPORTANT DO YOU CONSIDER PROMPT AND EFFICIENT SERVICE?

For more than thirty years an office has been maintained in Detroit to be in a better position to supply the Michigan Medical Profession with prompt and efficient service on Fischer X-Ray, Physical Medicine and Rehabilitation Equipment.

A large crew of capable factory-trained representatives is maintained in Michigan to give prompt service throughout the state.

Because of this competent service and the high quality of Fischer products, there are many satisfied users in Michigan.

H. G. FISCHER & CO.
OF DETROIT

H. M. Berry — J. N. Griffith
M. V. Scudder — L. H. Wolfe

21406 Fenkell Ave., Detroit 23, Michigan

Phone: KE 7-4140



"Space-saver" X-Ray Unit. 200, 100, 75, 50, 30 Ma.



Portable Ultrasonic Generator. F.C.C. Type Approved.



Short Wave Diathermy Unit. F.C.C. Type Approved.

in general, in discussing driver training for young people in the December, 1957, number, states:

"The state of Michigan has just taken a giant step aimed at reducing teen-ager's highway suicide. It should interest parents, teachers and administrators of the more than 9500 high schools in the country that do nothing for driver education.

"In Michigan, since last February, no one under eighteen can be licensed to drive unless he has passed an approved course in driver education. All licensees must be at least sixteen years old. Michigan thus becomes the first state to make driver training a prerequisite for obtaining an operator's license. State officials have been quoted as saying that the time is long past when we can afford to send a youthful, inexperienced driver on the highway in a modern high-powered automobile with the haphazard training of parents or other adults who themselves may know few of the techniques of a professional driver."

* * *

President Eisenhower has appointed five new members of the National Advisory Committee to the Selective Service System on the Selection of Physicians, Dentists and Allied Specialists to replace members who have resigned. One of the new members is Frances Graff, R.N., Grand Rapids, Director, School of Nursing and Nursing Service, Blodgett Memorial Hospital, Grand Rapids, and Past President, Michigan League of Nursing Education.

* * *

Edmund L. Cooper, M.D., Detroit, was a guest lecturer at the Oklahoma City Clinical Conference in October, 1957. He spoke on "The Principles of Ocular Muscle Surgery" and "The Need for Early Treatment of Strabismus." Dr. Cooper was re-elected secretary-treasurer of the American Orthoptic Council at its annual meeting.

* * *

The American College of Physicians has announced postgraduate courses for the spring of 1958. Courses 1, 2 and 3 will be finished by the time this item is published.

Course 1.—March 3-7, 1958. New York Hospital, New York, N. Y.

Course 2.—April 10-12, 1958. New York University Post-Graduate Medical School, New York, N. Y.

Course 3.—April 14-18, 1958. University of Pennsylvania School of Medicine, Philadelphia, Pa.

Course 4.—May 12-16, 1958. University of Illinois College of Medicine, Chicago. "Current Views in the Diagnosis and Treatment of Cardiovascular Diseases in the Child and the Adult."

Course 5.—June 2-6, 1958. State University of Iowa College of Medicine, Iowa City, Iowa. "Principles and Practice of Internal Medicine."

Course 6.—June 9-13, 1958. The University of Rochester School of Medicine and Dentistry, Rochester, New York. "Selected Topics in Hematology for Internists."

Course 7.—June 16-20, 1958. University of California School of Medicine, San Francisco, California. "Internal Medicine."

* * *

The Fifth International Congress of Internal Medicine will be held in Philadelphia, April 23-26, 1958. This will probably be the world's largest international gathering of scientists and clinicians concerned with internal medicine. Among the eighty-one foreign speakers will be some from the Soviet Union, Czechoslovakia, Hungary, Rumania and Poland. There will be special lectures by Paul Dudley White, M.D., of Boston; Charles H. Best, M.D., of Toronto; Sir Russell Brain of London; Count Aldo Castellani of Lisbon; Josef Charvat, M.D., of Prague; Mariano R. Castex, M.D., of Buenos Aires; Luigi Villa, M.D., Milan; Hisao Morita, M.D., Tokyo; Shields Warren, M.D., Boston; Nanna Svartz, M.D., Stockholm; Jonas E. Salk, M.D., Pittsburgh; Istvan Rusznyak, M.D., Budapest; De Oya, M.D., Madrid; and Carlos Cruz Lima, M.D., Rio de Janeiro. Michigan is represented on the program by John W. Keyes, M.D., Adult Cardiology, Henry Ford Hospital, Detroit.

* * *

Medical Exhibit Program.—A release dated February 26 announces an historic program in the field of medical research and communications, by the Student American Medical Association.

The program aims to encourage medical students, both as assistants to faculty members in important medical research today and as investigators tomorrow, to report their acquired knowledge within the profession through the medium of the scientific exhibit at outstanding medical conventions. All interns and residents are eligible for a special award to be given at the Annual Student American Medical Association Convention in Chicago, May 1-4, 1958.

With the support of Lakeside Laboratories, Inc., the Student AMA is launching a competitive program with prizes of $500, $350, and $250 being awarded to medical students. A separate award of $500 is offered to interns or residents whose exhibit is judged the most significant contribution. In addition, the two $500 winners this year will also enjoy a free trip to San Francisco in June where they will show their exhibits at the annual convention of the American Medical Association.

* * *



Superstitions and misconceptions about tuberculosis set the theme for a new animated film "Are You Positive?" It deals with tuberculosis control efforts including medical care and detection of the disease. Slanted toward the lay public, the film is intended to correct misconceptions about tuberculosis. It is part of a nation-wide information campaign. The motion picture in full color is suitable for school and adult health education programs. Its running time is thirteen and one half minutes. "Are You Positive?" is available through local tuberculosis associations or through the Michigan Tuberculosis Association, 403 Seymour Avenue, Lansing 14, Michigan.—MICHIGAN TUBERCULOSIS ASSOCIATION

* * *

After almost three years of planning, the Educational Council for Foreign Medical Graduates scheduled the American Medical Qualification examination for March 1958.

Sponsoring agencies are the American Hospital Association, Association of American Medical Colleges, American Medical Association and the Federation of State Medical Boards of the United States.

It will distribute to foreign medical graduates around the world authentic information regarding opportunities, difficulties and pit-falls involved in coming to the United States as an exchange student or coming on an immigrant visa with the hope of becoming licensed to practice.

The New Council will provide hospitals, state licensing boards, and specialty boards which the foreign medical graduate designates, with results of the three-way screening.

* * *

Benefit payments by insurance companies to Americans protected by health insurance policies amounted to a record $2.5 billion in 1957, the Health Insurance Institute reported. The figure, the Institute said, represents a 16 per cent increase in benefit payments over the amount paid in 1956.

* * *

A man's home may be his castle, but it can also be his guillotine. This warning was presented by Robert H. Trimby, M.D., of the Ingham County Medical Society at the Michigan Rural Health Conference at the University of Michigan in mid-January.

Doctor Trimby pointed out that home accidents are now the chief cause of death in children under the age of five years in the United States.

The cost to the government for that part of the Medicare program being administered by Mutual of Omaha is running less than was agreed upon, it was announced by the Company in February.

In June 1957, the company stated, a negotiated rate of $1.43 per claim was agreed upon. By the end of 1957, Mutual of Omaha's experience indicates that the cost to the government for providing medical care to dependents of military personnel is now less than $1.30 per claim, a saving to the government of over 10 per cent.

* * *

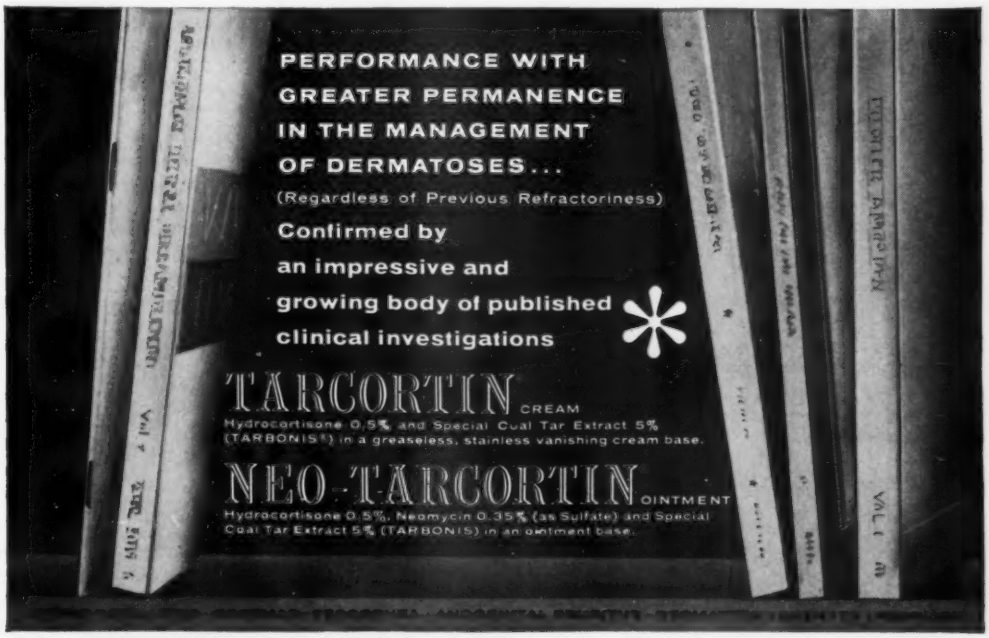
The Lawrence Reynolds Library, one of the world's most valuable private medical collections, was presented in February to the University of Alabama Medical Center in Birmingham.

The Library is a gift of Lawrence Reynolds, M.D., Detroit Radiologist and Chief of Staff of Harper Hospital, to his native State and to the University where he received his undergraduate education.

Collected over a period of thirty-five years, the Reynolds Library consists of over 5,000 books and about 5,000 manuscripts and autographed letters. Many of the books date from the fifteenth century.

* * *

Responsibilities of both the doctor and the lawyer in a criminal trial involving medical testimony was discussed at the annual joint meeting of the Muskegon County Medical Society with the Muskegon County Bar



* J.A.M.A. *166*:158,1958; Welsh, A.L. and Ede, M. "...prompt remissions of...acute phases." with TARCORTIN

R&C REED & CARNRICK / Jersey City 6, New Jersey

* 1. Clyman, S. G.: Postgrad. Med. *21*:309, 1957.
2. Bleiberg, J.: J. M. Soc. New Jersey *53*:37, 1956.
3. Abrams, B. P., and Shaw, C.: Clin. Med. *3*:839, 1956.
4. Welsh, A. L., and Ede, M.: Ohio State M. J. *50*:837, 1954.
5. Bleiberg, J.: Am. Practitioner *8*:1404, 1957.

Association, in January. The dinner event was chaired by Harold D. Dykhuizen, M.D., president of the society.

* * *

E. C. Swanson, M.D., of Vassar, was chosen as one of the three elected members of the Executive Council of the Federation of Medical Boards of the United States at the 54th Annual Congress on Medical Education and Licensure held in Chicago, February 8-12, 1958.

* * *

The 1958 meeting of the American Goiter Association will be held in the St. Francis Hotel, San Francisco, June 17-18-19. The three-day program will consist of papers and discussions dealing with the physiology and diseases of the thyroid gland. For hotel reservations write Goiter Housing Bureau, Room 300, 61 Grove Street, San Francisco, Calif., enclosing $10.00 deposit per room.

* * *

The Chicago Diabetes Association is again sponsoring the Summer Camp for Diabetic Children at Holiday Home, Lake Geneva, Wisconsin, July 20-August 10, 1958. Children from eight through fourteen years of age are eligible. For applications and information write the Chicago Diabetes Association, 5 South Wabash Avenue, Chicago 3, Illinois.

* * *

The Fourteenth Congress and Graduate Instructional Course in Allergy of The American College of Allergists will be held in Atlantic City, New Jersey, April 20-25, 1958. For information and registration forms write John D. Gillaspie, M.D., Treasurer, the American College of Allergists, 2049 Broadway, Boulder, Colo.

* * *

Michigan ranks 35th among the forty-eight states in the ratio of private physicians to its population, according to statements made by R. W. Spalding, M.D., chairman of the doctor placement committee of the Michigan Health Council, at the January 22 Michigan Rural Health Conference in Ann Arbor. He said the state has one practicing physician for every 1,218 residents, based on 1956 population estimates. This compares with a national average of one doctor for every 772 persons.

* * *

Seward E. Miller, M.D., was appointed as director of the newly organized Department of Industrial Health in the University of Michigan's School of Public Health by the Board of Regents of the University at their January 10 meeting.

* * *

The Children's Hospital of Philadelphia and the Graduate and Undergraduate Schools of Medicine, University of Pennsylvania, announce a series of short refresher courses for 1958. Course 1—"Pediatric Advances," will be held May 26-30; Course 2—"Practical Pediatric Hematology," June 2-4, and Course 3—"Hemolytic Disease of the Newborn," June 5-6.

Applications and correspondence should be directed to Irving J. Wolman, M.D., Children's Hospital of Philadelphia, 1740 Bainbridge Street, Philadelphia 46, Pennsylvania.

TESTIMONIAL DINNER HONORS H. B. ZEMMER, M.D.

A surprise testimonial was held for Harry B. Zemmer, M.D., on February 13, 1958, by the Lapeer County Medical Society and Auxiliary.



(Left to right) G. W. Slagle, M.D., James R. Doty, M.D., and H. B. Zemmer, M.D.

The testimonial was scheduled as a regular Society meeting, and Doctor Zemmer was greeted by a welcoming group of more than forty confreres who came to pay tribute to a man having made many personal contributions to medicine and health in Michigan during the past thirty-four years. The meeting was arranged by James Doty, M.D.

Billed in advance as speaker for the regular meeting, L. Fernald Foster, M.D., tossed aside notes for his planned speech and recalled for the group some of the activities of Doctor Zemmer since his graduation from Wayne University School of Medicine in 1918. He said in part, "Today we all honor you, Harry, for the many contributions you have made to your profession, your medical organizations and your local and state community. You have been a leader whose accomplishments have always redounded to the benefit of others. Your high standards of personal conduct and achievement would, if emulated by more today, give us a better world in which to live."

Heading the list of colleagues on hand to voice their personal congratulations was George W. Slagle, M.D., MSMS president from Battle Creek. Others included J. K. Altland, M.D., Lansing; Z. Stephen Bohn, M.D., Detroit; H. Waldo Bird, M.D., Ann Arbor; Joseph Beer, M.D., St. Clair; Doctors Leland Howey and Olive Lohr of Saginaw; and MSMS staff members headed by William J. Burns, Executive Director.

Messages of congratulations from those unable to attend were read by James Doty, M.D., who served as toastmaster of the affair. Writers included G. B. Saltonstall, M.D., MSMS president-elect; D. Bruce Wiley, M.D., T. P. Wickliffe, M.D., Ralph W. Shook, M.D., Wilfrid Haughey, M.D.; and Wm. M. LeFevre, M.D.

As a final gesture, Doctor Zemmer was presented with a gold watch—a token of esteem from the members of the Lapeer County Medical Society.

T. Boyd Bolitho, M.D., Chairman of the Marquette-Alger County Medical Society's disaster planning committee, announced last month that members of the society are being organized into groups and teams to function in the event of major disaster requiring large scale medical services. The society's action was in support of civil defense recommendations. The physicians of the area have been divided into three groups on the basis of geography, hospital affiliation and field of practice.

* * *

The Auxiliary to the Muskegon County Medical Society displayed a medical exhibit at the Muskegon Home Show in March.

* * *

The American Medical Association will seek voluntary curbs on misleading and objectionable advertising in line with a resolution by the House of Delegates in November. Plans call for a meeting with media, agency, drug manufacturers and other representatives. The date is still to be set.

* * *

The University of Michigan and Ypsilanti State Hospital formally dedicated laboratories which will be used in a $1,000,000 joint research project in schizophrenia and psychopharmacology on February 18 at the State Hospital, outside of Ypsilanti.

The five-year project is the largest such joint research venture ever to be undertaken by a university and a state mental hospital. Dr. Ralph W. Gerard, professor of neurophysiology and member of the U-M's Mental Health Research Institute, will direct the research from the University side. Dr. Kenneth Moore of the State Hospital staff will be in charge of that phase.

Financing for the project comes from the Psychopharmacology Service Center of the National Institute of Mental Health of the U. S. Public Health Service.

The Michigan State Medical Society and the Clara Elizabeth Fund, in co-operation with the Michigan Department of Health, are sponsoring a workshop for teachers of expectant parent classes at Waldenwoods, north of Brighton, Michigan, on May 20, 21 and 22, 1958. All teachers and prospective teachers of classes and obstetric nursing supervisors are invited to attend. Applications should be made by May 1 to the Maternal and Child Health Division of the Michigan Department of Health.

Members of the Houghton-Baraga-Keweenaw Medical Society and the Copper Country Bar Association, with their auxiliaries, met in early December in Calumet for their second joint meeting in 1957. Presidents of the respective organizations, A. B. Aldrich, M.D., and John Kiiskila, presented plans for the joint sponsorship of the first Career Day in that area. The program will be directed to eighth and ninth grade students, who have not yet selected specific courses of study.

ST. JOSEPH'S RETREAT



Member: American Hospital Association
Catholic Hospital Association
National Association of Private Mental Hospitals
The Central Neuro-Psychiatric Hospital Association

Under the direction of the Daughters of Charity of St. Vincent de Paul

Serving Metropolitan Detroit and Michigan almost a century

Martin H. Hoffmann, M.D.
Medical Director

23200 West Michigan Avenue
Dearborn
Logan 1-1400

The Veterans Administration recently announced it will call for bids in May on new clinical and animal laboratories for the VA Hospital at Dearborn, and the animal laboratory for the VA Hospital at Ann Arbor as well as four other construction projects in other parts of the country. Cost range for the Dearborn project is set at $300,000-$400,000, and for Ann Arbor $150,000-$200,000.

CONFERENCE ON REHABILITATION OF PATIENTS IN THE GENERAL HOSPITAL

Kellogg Center for Continuing Education
Michigan State University—East Lansing

May 14, 1958

Morning Session—9:00 a.m.

Introduction to the Conference: F. C. SWARTZ, M.D., Lansing, Michigan, Chairman of the Conference

"The Problem of Rehabilitation and Its Solution"
MICHAEL M. DACSO, M.D., New York, New York
Director Physical Medicine and Rehabilitation Service
Goldwater Mem. Hospital, Bellevue Medical Center

"Materiel Needed for Rehabilitation of General Hospital Patients"
JAMES W. RAE, M.D., Ann Arbor, Michigan
Director, Department of Physical Medicine and Rehabilitation
University of Michigan Medical School

Luncheon—12 Noon

"Restoration Is at Least as Much a Matter of Spirit as of Body"
FR. SUDEKAMP, Secretary of Catholic Charities
Detroit, Michigan

Afternoon Session—1:45 p.m.

"The Personnel Needs for the Rehabilitation of the Patients in a General Hospital"
MAX W. NEWMAN, M.D., Detroit, Michigan
Director of Rehabilitation, Carmel Hall, Detroit

"The Total Worth of a Rehabilitation Effort Directed Toward Patients in a General Hospital"
ISIDORE JAY BRIGHTMAN, M.D., Albany, New York
Executive Director, New York State Interdepartmental Health Resources Board

Question and Answer Panel

Co-sponsored by: Michigan Hospital Association, Michigan League for Nursing, Michigan State Medical Society, Michigan State Nurses Association, and College of Science and Arts—MSU Nursing Education, in co-operation with Continuing Education Service, MSU.

NORTHERN TRI-STATE MEDICAL ASSOCIATION

The 85th annual meeting of the Northern Tri-State Medical Association will be held in the Morris Inn, University of Notre Dame campus, South Bend, Indiana, Thursday, May 8, 1958. The program is as follows (Central Daylight Saving Time):

Morning Session—8:00 a.m.

Welcome—R. A. FARGHER, M.D., President
Keith E. Selby, M.D., President of St. Joseph County Medical Society

"Dynamics of Geriatrics." C. HOWARD ROSS, M.D., Ann Arbor, Michigan

"Fever of Undetermined Origin." FRANK J. HECK, M.D., Mayo Clinic.

"What You Can Do With Your Money—If You Have Any?" DON JUAN FERNANDEZ, of Merrill, Lynch, Pierce, Fenner & Smith, Chicago, Illinois

Social Hour—11:30 a.m.

Courtesy of Wayne Pharmacal Company

Luncheon at Morris Inn—12:00 Noon

Invocation. REV. PHILIP S. MOORE, C.S.C., Vice-President, Academic Affairs, University of Notre Dame.

Remarks: KENNETH OLSON, M.D., President-Elect, Indiana State Medical Association, South Bend, Indiana.

Address: "Medical-Public Responsibility"—THE HONORABLE G. MENNEN WILLIAMS, Governor of the State of Michigan.

Short Business Meeting.

Afternoon Session—2:00 p.m.

"What's the Use of God?" REV. CALVIN W. DIDIER, Presbyterian Church, La Porte, Indiana. (This should be of much interest to both physicians and wives who are invited to attend.)

"The Anticoagulants—Where Are We Now?" KARL PAUL LINK, PH.D., University of Wisconsin. (Recipient of Lasker Award for discovery of Dicumarol.)

"Gynechiatry"—WILLIAM B. KELLER, M.D., Louisville, Kentucky, General Hospital.

Entertainment for the Ladies in the afternoon

Send registration fee of $5.00 and luncheon reservation, at $5.00 per person, to Charles M. Burgess, M.D., 23235 Woodward Avenue, Ferndale 20, Michigan.

Your one-stop direct source for the
FINEST IN X-RAY
apparatus . . . service . . . supplies

DIRECT FACTORY BRANCHES
DETROIT
18801 W. 7 Mile Rd. • KEnwood 7-6300
DULUTH
928 E. 2nd St. • RAndolph 4-8648

RESIDENT REPRESENTATIVES
EAST GRAND RAPIDS
J. E. TIPPING, 1044 Keneberry Way, S.E. • GLendale 2-5283
FLINT
E. F. PATTON, 1202 Milbourne • FLint 5-0842
GREEN BAY
J. J. VICTOR, 1242 S. Quincy St. • HEmlock 5-5742
JACKSON
E. J. RHINEHART, 231 N. Wisner St. • STate 4-1986

Fred J. Drolett, M.D., Lansing, celebrated his seventy-ninth birthday in January and received a surprise birthday bouquet from the manager of the office building where Doctor Drolett has practiced since its construction in 1923.

* * *

The Monroe County Medical Society held its annual meeting with the Monroe County Bar Association in February. Program chairman for the meeting was W. W. Bond, M.D.

MEDICAL TELEVISION SHOWS

WJBK-TV, Detroit

Produced By
Michigan Health Council

February 2—Subject: How the Doctor Examines Your Heart
Guests: M. S. Chambers, M.D., Flint, President of Michigan Heart Association, John Bielawski, M.D., Detroit, Medical Director of M.H.A., and Ernest T. Guy, Executive Director of M.H.A., of Detroit

February 9—Subject: Hospital Teamwork—(Film—"A Place for Healing")

February 16—Subject: Pre-Teen Behavior—(Film—"From Ten to Twelve")

February 23—Subject: Health Careers—(Films—"Medical Associates" and "Health Careers")

The Ingham County Medical Society announces its thirtieth annual May Clinic, May 1, 1958, at the Hotel Olds, Lansing, Michigan. Speakers will include:

Donald Glover, M.D., Surgery, St. Lukes Hospital, Cleveland

Aaron E. Kanter, M.D., Gynecology, Chicago Medical School

Stuart C. Cullen, M.D., Anesthesiology, University of Iowa.

A. B. Baker, M.D., Neurology, University of Minnesota

Dr. Ancel Keys, University of Minnesota

M. D. LOCATIONS

Through February 28, 1958

Placed by Michigan Health Council
Robert T. Nolta, M.D.—Atlanta

Assisted by Michigan Health Council
Norman H. Parmelee, M.D., Roseville



with **BUFFERIN®**
IN ARTHRITIS

salicylate benefits with minimal salicylate drawbacks

Rapid and prolonged relief—with less intolerance. The analgesic and specific anti-inflammatory action of BUFFERIN helps reduce pain and joint edema—comfortably. BUFFERIN caused no gastric distress in 70 per cent of hospitalized arthritics with proved intolerance to aspirin. (Arthritics are at least 3 to 10 times as intolerant to straight aspirin as the general population.[1])

No sodium accumulation. Because BUFFERIN is sodium free, massive dosage for prolonged periods will not cause sodium accumulation or edema, even in cardiovascular cases.

Each *sodium-free* BUFFERIN tablet contains acetylsalicylic acid, 5 grains, and the antacids magnesium carbonate and aluminum glycinate.

Reference: 1. J.A.M.A. 158:386 (June 4) 1955.

ANOTHER FINE PRODUCT OF BRISTOL-MYERS

Bristol-Myers Company
19 West 50 St., New York 20, N. Y

THE DOCTOR'S LIBRARY

Acknowledgments of all books received will be made in this column, and this will be deemed by us as full compensation to those sending them. A selection will be made for review, as expedient.

MODERN SEX LIFE. By Edwin W. Hirsch, M.D. A Signet Book. New York: The New American Library, 1957. Price 35 cents.

This is a completely revised and rewritten edition, based on the book, "Modern Sex Life," first published as "Sex Power in Marriage."

THAT DEGENERATE SPIROCHETE. By Oscar Daniel Meyer, M.D. New York: Vantage Press, Inc., 1957. Price $5.00.

This book is definitely not a medical textbook but might be useful in the campaign of public education to control venereal diseases.

H.A.

THE INCURABLE WOUND AND FURTHER NARRATIVES OF MEDICAL DETECTION. By Berton Roueché. Boston-Toronto: Little, Brown and Company, 1957. Price, $3.50.

This book contains a collection of six stories pertaining to problems of medical diagnosis, some involving detective work. While told in novel form for the general public, they still make most interesting as well as instructive leisure time reading for the physician.

H.A.

DEAFNESS, MUTISM AND MENTAL DEFICIENCY IN CHILDREN. By Louis Minski, M.D., F.R.C.P., D.P.M., Consultant Psychiatrist Royal National Throat, Nose and Ear Hospital, Grays Inn Road, W.C.I., Associate Psychiatrist St. George's Hospital, Hyde Park Corner, S.W.I. New York: Philosophical Library, Inc., 1957. Price, $3.75.

This compact eight-page book presents the testing methods for distinguishing mentally defective children from deaf children with capacity for learning by modern method of treatment.

It would be most useful for psychologists, speech therapists and otologists.

R.S.S.

CLINICAL GASTROENTEROLOGY. By Eddy D. Palmer, M.D., F.A.C.P., Lieutenant Colonel, Medical Corps, United States Army. Consultant in Gastroenterology to The Surgeon General; formerly Chief of Gastroenterology Service, Walter Reed Army Hospital. Illustrations by Phyllis Anderson. 616 pages. New York: Hoeber-Harper, 1957. Price, $18.50.

This is a new book, first edition, presenting in excellent fashion the vast experience of the author in clinical diagnosis and therapy of the entire upper and lower gastrointestinal system starting with tongue and pharynx, and accessory organs, the spleen, pancreas, gall bladder and liver. He presents a new concept of the anatomy of the normal esophagogastric junction as it exists during life, the junctional area, with a "redefinition of the normal location of the esophagogas-

BRIGHTON HOSPITAL

A non-profit Foundation

FOR ALCOHOLISM

A facility designed to rehabilitate or to aid the addict in arresting his addiction.

Walter E. Green, M.D., Superintendent and Medical Director.



Brighton Hospital meets the standards established by the Michigan State Board of Alcoholism and is recommended by that Board.

12851 East Grand River
(U.S. 16)
Brighton, Michigan
Academy 7-1211

NOW U.S. SAVINGS BONDS PAY YOU HIGHER INTEREST—FASTER!

If you've always bought U.S. Savings Bonds for their rock-ribbed safety, their guaranteed return, the way they make saving easier—you've got one more reason now!

Every Series E United States Savings Bond you've bought since February 1, 1957 pays you a new, higher interest—3¼% when held to maturity! It reaches maturity *faster*—in only 8 years and 11 months. And redemption values are higher, too, especially in the earlier years.

About your older Bonds? Easy. Just hold onto them. As you know, the rate of interest a Savings Bond pays increases with each year you own it, until maturity. Therefore, the best idea is to *buy the new—and hold the old!*

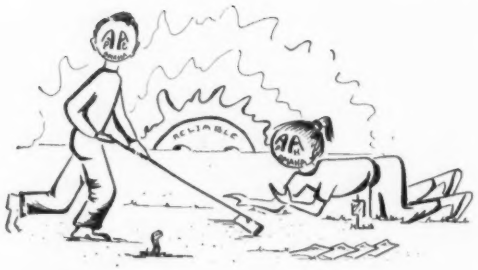
The main thing about E Bonds, of course, is their complete safety. Principal and interest are fully guaranteed. They are loss-proof, fire-proof, theft-proof—because the Treasury will replace them without charge in case of mishap. Your Savings Bonds are as solid as a rock—backed by the full faith and credit of the United States.

Maybe you already know about Savings Bonds—as one of the 40 million Americans who own them today, or as one of the other millions who have used Bond savings to help pay for new homes, cars, or college educations, or to make retirement financially easier. If so, this is familiar territory to you—you *know* there's no better way to save.

But if you're new to the game, find out about Savings Bonds and what they can do for your future. Ask your banker, or check with your employer about the automatic Payroll Savings Plan that makes saving painless and easy.

PART OF EVERY AMERICAN'S SAVINGS
BELONGS IN U. S. SAVINGS BONDS

The U.S. Government does not pay for this advertisement. It is donated by this publication in cooperation with the Advertising Council and the Magazine Publishers of America.



Protection against loss of income from accident and sickness as well as hospital expense benefits for you and all your eligible dependents.

ALL PREMIUMS COME FROM — PHYSICIANS SURGEONS DENTISTS — ALL BENEFITS GO TO

PHYSICIANS CASUALTY & HEALTH ASSOCIATIONS

OMAHA 31, NEBRASKA

Since 1902

SAMMOND PLEASANT LODGE

Offers to the elderly and chronically ill

Peace and quiet. Freedom of a large and richly furnished home and acres of lawns and wooded rolling grounds, scientifically prepared tasty meals, congenial companionship. A real

"Home away from Home"

Approved by the American Medical Association and Michigan State Department of Social Welfare—Highly recommended by members of the Medical Profession who have had patients at the Lodge.

For further information write to:

SAMMOND PLEASANT LODGE

124 West Gates Street

Romeo, Michigan

tric mucosal junction" in his discussion of mucosal prolapse at this area. A fine chapter is devoted to diagnosis of the abdomen in general, reminding us of abdominal epilepsy, abdominal migraine and abdominal angina.

New techniques and methods of diagnosis to find obscure gastric lesions are covered. The discussion on gastritis is unusually complete, a bit controversial these days. Adult hypertrophic pyloric stenosis is well handled, and has appeared more and more in the literature recently. The use of aortography in diagnosing gastrointestinal bleeding is presented. Vagotomy is discussed and given approval; total gastrectomy has been abandoned, the dumping syndrome is thoroughly discussed along with other postoperative problems which follow gastric resections.

Peutz-Jeghers Syndrome, only recently publicized, is described in detail, along with the syndrome of malignant small intestinal argentaffinoma with systemic effects. Hirschsprung's disease is discussed as a surgical lesion, and early surgery for diverticulitis is advised. A very complete discussion is given on ulcerative colitis, and the danger of the new hydrophilic colloids as foreign bodies is stressed.

New methods of diagnosis in portal hypertension such as splenoportography are covered well with review of therapeutic measures such as the Sengstaken tube, portocaval and splenorenal shunts. The use of intravenous cholografin and operative cholangiography in difficult biliary tract diagnoses is presented. The "silent gall stone," the postoperative cholecystectomy syndrome and its many ramifications, the treatment of acute and chronic pancreatitis are covered thoroughly, as are common and uncommon lesions of the spleen. A final chapter on gastrointestinal manifestations of certain far-removed diseases is very timely, including the anemias, cardiovascular lesions, infections, pregnancy, urological lesions and anorexia nervosa. This is an excellent reference volume for physicians and surgeons in all the fields of medicine.

S.B.W.

BOOKS RECEIVED

SIXTH INTERNATIONAL CONGRESS OF OTOLARYNGOLOGY. Washington, D. C., May 5-10, 1957.

INTERNATIONAL DIRECTORY OF OTOLARYNGOLOGY. Washington Congress Edition. (Revised) Philadelphia, 1957.

FEAR: CONTAGION AND CONQUEST. By James Clark Moloney, M.D. Philosophical Library, Inc., New York. Price $3.75.

MEDICAL SERVICES FOR RURAL AREAS. The Tennessee Medical Foundation by William A. Massie, Chairman, Health Committee, Council of the Southern Mountains, formerly Field Secretary, The Tennessee Medical Foundation. Published for The Commonwealth Fund by Harvard University Press, Cambridge, Massachusetts. Price $1.25.

ESSAYS IN METABOLISM. The John Punnett Peters Number of the Yale Journal of Biology and Medicine. Edited by Louis G. Welt, M.D. Professor of Medicine, University of North Carolina School of Medi-

cine, Chapel Hill. Little, Brown and Company, Boston-Toronto. Price $6.50.

HEALTH YEARBOOK 1956. Compiled by Oliver E. Byrd, Ed.D., M.D., F.A.P.H.A. Professor of Health Education, Stanford University. Stanford University Press, Stanford, California. Price $5.00.

FADS AND FALLACIES IN THE NAME OF SCIENCE (Formerly published under the title, In the Name of Science). By Martin Gardner. New York: Dover Publications, Inc., 1957. Price $1.50.

HEAD INJURIES AND THEIR MANAGEMENT. By Francis Asbury Echlin, M.D., C.M., M.Sc., M.E.D., Sc.D., F.A.C.S., Professor Clinical Neurosurgery, New York University-Post Graduate Medical School; Neurosurgeon, Lenox Hill Hospital; Attending Neurosurgeon, Bellevue Hospital and New York Eye and Ear Infirmary; Consulting Neurosurgeon, St Luke's Hospital, Newburgh, and Kingston Hospital. Philadelphia and Montreal: J. B. Lippincott Company, 1957. Price $3.00.

CIBA FOUNDATION SYMPOSIUM ON BONE STRUCTURE AND METABOLISM. Editors for the Ciba Foundation, G. E. Wolstenholme, O.B.E., M.A., M.B., B.Ch., and Cecilia M. O'Connor, B.Sc. 121 illustrations. Boston: Little, Brown and Company, 1957. Price $8.00.

NOTES ON ATOMIC ENERGY FOR MEDICAL OFFICERS. An Introduction to the Subject for Service and Other Medical Officers who may be concerned with defense against atomic bombs and similar problems. By the Royal Navy Medical School. Alverstoke, Hampshire, England. New York: Philosophical Library, 1957. Price $4.75.

ADDRESS OF WELCOME

(Continued from Page 598)

It is wonderful that we can do all these things mechanically and technically and scientifically, and of course we are on the threshold of the greatest development in the history of our nation in that way. However, unless we are able to handle that in our day-to-day living on our local governmental level, on a state level and certainly on our national level, we will not derive and could not conceivably derive the maximum benefits from those things which you people and your associates in the scientific world are presenting to us.

If I may say a word along that line, I would urge that those who have done so much in this area broaden their base even more than they have to help us find a way to use the tools which they are making for all of us.

May I extend and re-emphasize the warm welcome that we give to all of you.



Plainwell Sanitarium

PLAINWELL, MICHIGAN

Member American Hospital Association

EDWIN M. WILLIAMSON, M.D.
Psychiatrist-in-Chief

Professional care for the nervous and mentally ill.

Telephone MUrray 5-8441



Restful Six-acre Estate Overlooking the Kalamazoo River

Malpractice Prophylaxis

IT'S NOT AN ACCIDENT
our claims and suits
go down while else-
where they go up

Specialized Service makes our doctor safer

THE
MEDICAL PROTECTIVE COMPANY
FORT WAYNE, INDIANA

Professional Protection Exclusively since 1899

DETROIT Office

George A. Triplett and Richard K. Wind
Representatives

2405 West McNichols Road

Telephone University 2-8064

Classified Advertising

$2.50 per insertion of fifty words or less, with an additional five cents per word in excess of fifty.

OPPORTUNITY to open practice in one of West Michigan's fast-growing communities. On White Lake and Lake Michigan. Excellent schools, all sports. Strictly modern suite of offices available on ground floor, 20 minutes from hospitals. Contact Norman Pitkin, Rexall Store, Whitehall, Michigan.

INTERNIST, GENERAL PRACTICE and OB-GYN for association with expanding Medical Group. Unexcelled opportunities for development. Write: Box 4, 606, Townsend Street, Lansing 15, Michigan.

FOR SALE: Well established allergy practice in a Michigan city, population 170,000. Annual gross income $50,000. Physician retiring because of ill health. Write: Box 5, 606 Townsend, Lansing 15, Michigan.

PHYSICIAN (Sanatorium)—Salary $12,006 to $14,094 yearly. Serves as head of a major division of a state tuberculosis sanatorium located in Michigan's upper peninsula. Must be able to get a license to practice medicine in Michigan and have one year of experience as a physician specializing in the diagnosis and/or treatment of tuberculosis. Liberal vacation plans, generous sick-leave allowance, plus all other attractive Michigan Civil Service benefits. Write Michigan Civil Service, Lansing 13, Michigan.

MERCYWOOD SANITARIUM

Conducted by Sisters of Mercy

Treatment for Mild Nervous and Mental Disorders

JACKSON ROAD ANN ARBOR, MICHIGAN

NOrmandy 3-8571

PM says:

"WHY TAKE CHANCES"

No practice is too small—no group too large
to benefit from PM's management experience

WRITE OR CALL FOR INFORMATION

PM • PROFESSIONAL • MANAGEMENT

Security Bank Building — Battle Creek
SAGINAW — GRAND RAPIDS — DETROIT

A COMPLETE BUSINESS SERVICE FOR THE MEDICAL PROFESSION

Affiliated Offices in Other Cities

Index to Advertisers

Ames Co., Inc. 522
Ayerst Laboratories 492

Barry Laboratories 493
Borden's 512
Brighton Hospital 634
Bristol-Myers Co. 633
Burroughs Wellcome & Co. 516, 554-D, Insert facing 484

Central Laboratory 618
Classified Advertising 638
Ciba 501
Coca-Cola 637

Fischer, H. G., & Co. 627

General Electric Co. 632

Ingram, G. A., Co. 616, 619

Keeley Institute 639
Kenny Foundation 640

Lakeside Laboratories, Inc. 470
Lederle Laboratories 482, 483, 489 Insert facing 492, 497, 506, 507, 554-B, 554-C
Lilly, Eli, & Co. 477, 524

Maltbie Laboratories Division 511
Marion Laboratories, Inc. 518
Medical Arts Supply Co. 508
Medical Case History Bureau 617
Medical Protective Co. 638
Merck Sharp & Dohme 475, 490, 491, 502, 503, 514, 515, 521
Mercywood Sanitarium 638
Meyer & Co. 625

Noble-Blackmer, Inc. 623

Parke, Davis & Co. Cover II, 469
Patch, E. L., Co. 614, 615
Physicians Casualty & Health Associations 636
Picker X-Ray Corporation 509
Plainwell Sanitarium 638
Professional Management 639

Reed & Carnrick 629
Riker Cover III
Robins, A. H., Co. 620, 621
Roerig 479, 487, 499, 513

St. Joseph's Retreat 631
Sammond Pleasant Lodge 636
Sanborn Co. 520
Schering Corporation 494, 495, 523
Searle 473, 611
Smith, Kline & French Laboratories Cover IV
Squibb 517, 554-A, 613

Tutag, S. J., & Co. 504

U. S. Savings Bonds 635
U. S. Vitamin Corporation 485
Upjohn Insert facing 508

Wallace Laboratories 519, Insert facing 624
Wine Advisory Board 505
Winthrop Laboratories 481

THE KEELEY INSTITUTE
DWIGHT, ILLINOIS

Treating alcoholism and other problems of addiction.
REGISTERED BY THE AMERICAN MEDICAL ASSOCIATION—
MEMBER AMERICAN HOSPITAL ASSOCIATION.

New Rehabilitation Center Now Open



22646 Woodward Avenue, Ferndale, Michigan. Phone Lincoln 8-6200

COMPLETE OUT-PATIENT REHABILITATION SERVICES AVAILABLE

Full staff of medical specialists
Physical Therapy
Occupational Therapy
Psychiatry
Social Service
Counseling in vocational, social and psychological problems
Training program for disabled homemakers
Lastest adaptive equipment and remedial aids for rehabilitation
Care and treatment for nerve, muscle or joint disabilities

Types of cases being treated include post-polio, multiple sclerosis, cerebral vascular accidents, traumatic injuries, Parkinson's disease, and other neuromuscular and neuroskeletal diseases.

In-patient care for acute polio and complete rehabilitation service provided at the Sister Elizabeth Kenny Polio Hospital, Farmington.

MEDICAL STAFF

John C. Montgomery, M.D., Pediatrics
James W. Rae, Jr., M.D., Physical Medicine
Frank H. Purcell, M.D., Orthopedics
George V. Pendy, M.D., Orthopedics
John W. Moses, M.D., Internal Medicine
Francis A. Martin, M.D., Neurological Surgery
Gordon R. Forrer, M.D., Psychiatry
E. T. Calhoun, M.D., Resident Physician

Patients accepted on referral of physician from any and every county in Michigan, regardless of race, creed or financial circumstances.

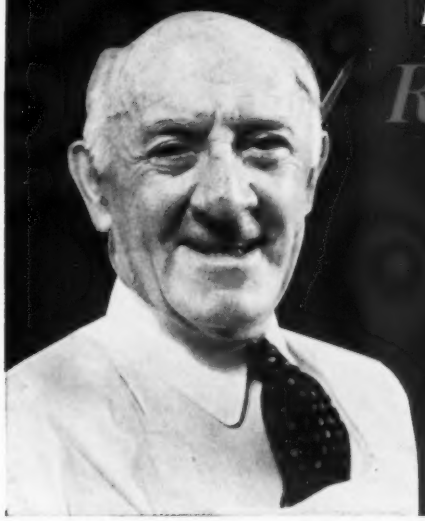
Member agency of the Michigan United Fund and the United Foundation.

Say you saw it in the Journal of the Michigan State Medical Society

Many such hypertensives have been on

Rauwiloid

for three years and more



for Rauwiloid IS better tolerated... "alseroxylon [Rauwiloid] is an antihypertensive agent of equal therapeutic efficacy to reserpine in the treatment of hypertension, but with significantly less toxicity."

Ford, R. V., and Moyer, J. H.: Rauwolfia Toxicity in the Treatment of Hypertension, Postgrad. Med. 23:41 (Jan.) 1958.

No Tolerance Development
Lower Incidence of Depression

Rauwiloid®

ALSEROXYLON, 2 MG.



just two tablets at bedtime

After full effect one tablet suffices

For gratifying Rauwolfia response virtually free from side actions

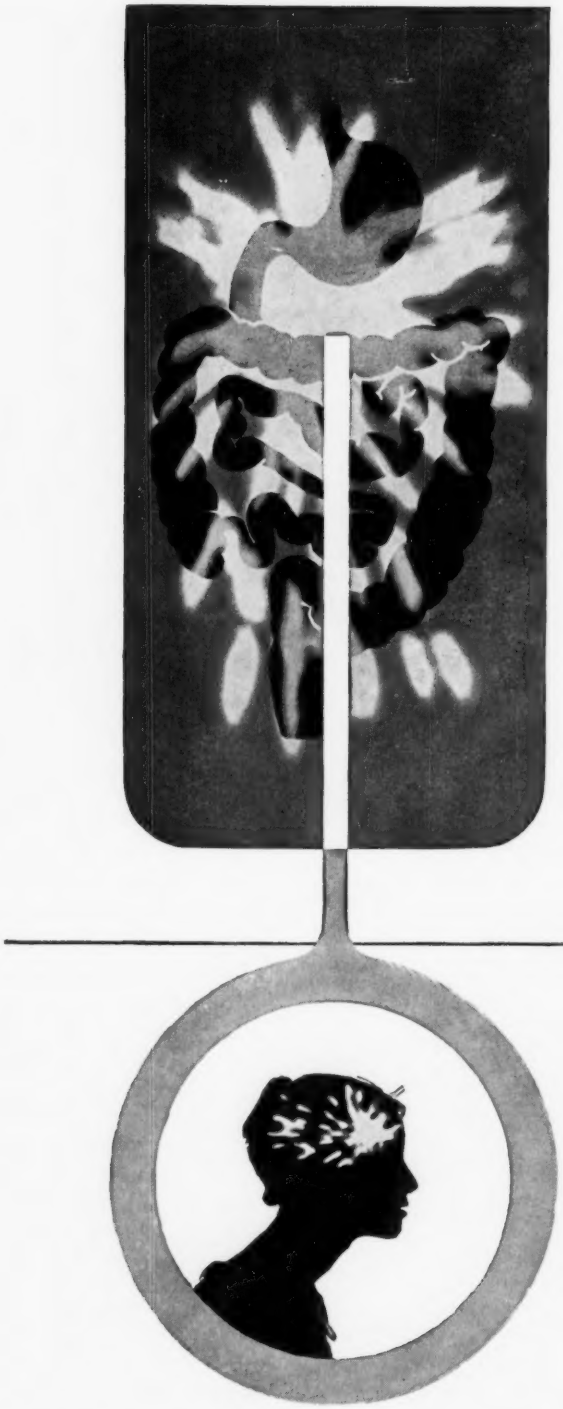
Riker
LOS ANGELES

When more potent drugs are needed, prescribe

Rauwiloid® + Veriloid®
alseroxylon 1 mg. and alkavervir 3 mg.
for moderate to severe hypertension.
Initial dose 1 tablet t.i.d., p.c.

Rauwiloid® + Hexamethonium
alseroxylon 1 mg. and hexamethonium chloride dihydrate 250 mg.
in severe, otherwise intractable hypertension.
Initial dose ½ tablet q.i.d.

Both combinations in convenient single-tablet form.



in G.I. disorders

'Compazine' controls tension —often brings complete relief

In such conditions as gastritis, pylorospasm, peptic ulcer and spastic colitis, 'Compazine' not only relieves anxiety and tension, but also controls the nausea and vomiting which often complicate these disorders.

Physicians who have used 'Compazine' in gastrointestinal disorders —often in chronic, unresponsive cases—have had gratifying results (87% favorable).

*Compazine**

the tranquilizer and antiemetic remarkable for its freedom from drowsiness and depressing effect

Available: Tablets, Ampuls, Multiple dose vials, Spansule® sustained release capsules, Syrup and Suppositories.

*T.M. Reg. U.S. Pat. Off. for prochlorperazine, S.K.F.

Smith Kline & French Laboratories, Philadelphia